

FIRE POND CLOSURE REPORT

The Dow Chemical Company

Fire Pond Closure Report

Hanging Rock Plant

Ironton, Ohio

*Supplemental Environmental
Project (SEP)*

Case V.W.001 '95

April 1997

78022.00.01

Environmental Resources Management, Inc.
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Hurricane, West Virginia 25526

TABLE OF CONTENTS

1.0	BACKGROUND	1
2.0	MOBILIZATION/DEMOBILIZATION	2
3.0	POND DEWATERING	3
4.0	SAMPLING OF SLUDGE AND SOIL UNDERLYING THE LINER	4
5.0	SLUDGE SOLIDIFICATION, EXCAVATION AND DISPOSAL	6
6.0	LINER REMOVAL AND DISPOSAL	7
7.0	UNDERLYING SOIL EXCAVATION AND DISPOSAL	8
8.0	CONFIRMATION OF ACCEPTABLE CLOSURE, BASED ON OHIO EPA RISK-BASED CLOSURE STANDARDS	9
9.0	POND BACKFILLING, GRADING AND COVERING	10
10.0	GEOLOGICAL/HYDROGEOLOGIC SUMMARY	11
11.0	REPORT PREPARATION AND SUBMITTAL	13

LIST OF FIGURES

FIGURE 1 LOCATION OF FIRE POND AND SAMPLE LOCATIONS MAP

LIST OF TABLES

TABLE 1	SUMMARY OF SOIL ANALYTICAL RESULTS (PPL-VOCS & SVOCS)
TABLE 2	SUMMARY OF SOIL AND SLUDGE ANALYTICAL RESULTS (TCLP)
TABLE 3	COMPARISON OF SOIL ANALYTICAL RESULTS (VOCS) TO USEPA REGION V, RCRA DATA QUALITY LEVEL TABLE UPDATE 1

**TABLE 4 COMPARISON OF SOIL ANALYTICAL RESULTS (SVOCS)
TO USEPA REGION V, RCRA DATA QUALITY LEVEL
TABLE UPDATE**

LIST OF APPENDICES

- APPENDIX A SOIL ANALYTICAL RESULTS (PPL-VOCS & SVOCS)**
- APPENDIX B SOIL AND SLUDGE ANALYTICAL RESULTS (TCLP)**
- APPENDIX C SLUDGE AND SOIL DISPOSAL MANIFESTS**
- APPENDIX D DAILY LOGS OF CONSTRUCTION ACTIVITIES**
- APPENDIX E PHOTO LOG OF POND CLOSURE ACTIVITIES**

BACKGROUND

The Dow Chemical Company (Dow) closed the Fire Water Pond (Pond) (Figure 1) at the Hanging Rock Plant, Ironton, Ohio, as part of an agreement with the United States Environmental Protection Agency (USEPA), Region V under the Supplemental Environmental Project (SEP) program for voluntary remediation for credit towards BIF penalties. The SEP was performed as part of the settlement of V.W. 001'95. This project consisted of the following substantive elements:

- 1) pond dewatering,
- 2) sampling sludge and soil underlying liner,
- 3) sludge solidification, excavation and disposal,
- 4) liner cutting, rolling, removing and disposal,
- 5) underlying soil excavation and disposal,
- 6) confirmation of acceptable closure, based on Ohio EPA risk-based closure standards,
- 7) pond backfilling, grading and limestone covering and
- 8) report preparation and submittal.

All project elements, except number 6 were to be completed regardless of contaminant concentrations. Element 6 would vary based on measured contaminant concentrations, as later specified.

Previous sampling and analysis conducted at the Site confirmed the presence of several organic compounds in the Pond. However, Dow believed that the contaminant levels did not warrant the need for remediation. To confirm this information, two (2) samples for disposal characterization and eight (8) samples from the soil underlying the liner were obtained to 1) characterize the sludge and soil for disposal and 2) characterize the soil from the sidewalls and bottom of the pond for the possible presence of Priority Pollutants List (PPL) Volatile Organic Compounds (VOCs) and Semivolatile Organic Compounds (SVOCs).

MOBILIZATION/DEMOBILIZATION

Enviro-Clean mobilized on 14 November 1996 to begin the Pond closure activities. Demobilization was completed on 19 December 1996. During the closure activities, Enviro-Clean mobilized equipment operators, a Site Manager, a tool trailer and earth moving equipment including an excavator, D5 dozer, dump truck and 953 track loader to the site. The labor and equipment were mobilized from Enviro-Clean's Columbus, Ohio Operations Center.

POND DEWATERING

Dow personnel removed the water from the pond. The water was pumped directly from the pond to Dow's existing waste water treatment plant. Approximately 1.8 million gallons of water were removed from the pond.

After de-watering the pond, ten (10) samples were collected, two (2) for disposal characterization of the sludge and soil and eight (8) from the soil underlying the liner. The disposal characterization samples were composited samples of pond sludge and soil underlying the liner.

Environmental Resources Management, Inc. (ERM) from the Hurricane, West Virginia office obtained the soil for characterization sampling. The sidewall samples were obtained on 6 November 1996. Due to the fluid-like consistency and thickness (+/- 3 feet) of the sludge, the bottom samples were not obtained until 20 November 1996, after sludge solidification.

A total of eight (8) samples from the soils underlying the rubber liner were collected. The sludge in the bottom of the Pond was moved away from the sample locations in order to prevent the cross contamination of the samples. Four (4) samples were collected from the bottom of the Pond (DOW-S-N-BTM, DOW-S-S-BTM, DOW-S-E-BTM and DOW-S-W-BTM) (Figure 1) and one (1) sample was collected from each side wall (DOW-S-N-DW, DOW-S-S-DW, DOW-S-E-DW and DOW-S-W-DW) (Figure 1). A spade and stainless steel spoon were used to collect the samples from the sidewalls. The samples collected from the bottom were obtained by using the excavator to remove the upper 6 inches of soil, and then a spade and stainless steel spoon were used to collect the samples. The sample locations were advanced to a depth of one foot.

All non-disposable sampling equipment was decontaminated before collecting the next sample as follows:

- Manual scrub with laboratory grade, non-phosphate soap and tap water, using a brush if necessary to remove particulate matter and surface films,
- Thorough rinse with distilled/deionized water,
- Pesticide grade methanol rinse (for samples collected for organics analysis),
- Triple rinse with distilled/deionized water,
- Air dry.

Following soil sampling activities, the soil sample from each location was transferred to the appropriate laboratory-supplied sample containers, sealed, labeled, placed in an ice chest and chilled to 4° Celsius.

The eight (8) samples were sent to CT&E Environmental Services Inc., Charleston, West Virginia and analyzed for PPL VOCs and SVOCs.

The results of the eight (8) samples from the soils underlying the rubber liner are summarized in Table 1 and the analytical data is found in Appendix A. For the VOC and SVOC compounds analyzed, there were no detections above the Method Detection Limit (MDL) for any of the eight samples.

The disposal characterization samples were collected on 6 November 1996 using a spade and/or a stainless steel spoon to collect the soil/sludge samples for compositing. The soil/sludge was placed in a stainless steel bowl, mixed and placed in the appropriate laboratory supplied containers. The sample containers were sealed, labeled, placed in an ice chest and chilled to 4° Celsius. The two (2) samples for disposal characterization were sent to Centre Analytical Laboratories, Inc., State College, PA and analyzed for TCLP (metals, VOC, SVOC, pesticides & herbicides), paint filter, ignitability, reactivity, and pH.

The results of the two (2) samples for disposal characterization are summarized in Table 2 and the analytical data is found in Appendix B. For the constituents and parameters analyzed, there were no detections above the TCLP limits, indicating that the sludge was non-hazardous.

As part of the sludge solidification, excavation and disposal effort, the perimeter fence around the Pond had to be removed. The fence fabric was removed from the posts and rolled into manageable sections.

Approximately 1,150 feet of fence fabric was permanently removed, including approximately 103.0 feet removed to be reinstalled by Dow at a later date. This included part of the gate and fence to the Wildlife Refuge. Because Dow intended to use the new crossover improvement, the fence and gate had to be permanently relocated. The fabric was stored on-site in a location designated by Dow. The fence posts were cut off at ground level with an acetylene torch and also stored in a location designated by Dow.

As part of the sludge solidification, excavation and disposal effort, a temporary crossover was constructed for equipment access to the Pond. The temporary crossover is located on the southwest corner of the pond and was reinforced with stone to provide truck and heavy equipment access to the pond area. A 20 foot by 30 inch diameter corrugated steel drain pipe was installed and approximately 50 tons of stone were placed to prepare the crossover for use at the Site. Due to wet weather conditions, an additional 278 tons of stone were placed in the crossover improvement area to allow truck access during site activities.

After the disposal analytical results were obtained, and the soil underlying the liner was characterized as non-hazardous, the process of sludge solidification began on 19 November 1996. To solidify the sludge, it was mixed with 104.98 tons of sawdust. The thickness of the sludge was approximately 3.0 feet, resulting in a total of 722.39 tons of sludge. The sludge and solidification media was mixed with the excavator bucket.

After solidification of the sludge, the sludge was excavated and placed into dump trucks for disposal at Green Valley Landfill, Rush, Kentucky as a non-hazardous, solid waste (see Appendix C for waste manifests).

Sludge removal began on 21 November 1996 and was completed on 22 November 1996. The sludge was removed using a tracked excavator and loaded directly into trucks for off-site disposal. 722.39 tons of sludge (based on landfill weight tickets) were removed from the Pond. The sludge was disposed of as non-hazardous, solid waste based on the results of the full TCLP analysis.

6.0

LINER REMOVAL AND DISPOSAL

Following sludge solidification, excavation and disposal, the liner was peeled off the sidewalls of the Pond with the excavator. The liner was torn into sections as it was removed and placed in dump trucks for off-site disposal. The liner on the bottom of the Pond was removed during sludge excavation. The liner was transported to Green Valley Landfill for disposal.

UNDERLYING SOIL EXCAVATION AND DISPOSAL

After the liner was removed, the upper 6 inches of underlying soil was removed using a tracked excavator and D5 dozer and the excavated soil was placed directly into trucks for disposal at Green Valley Landfill as a non-hazardous-solid waste (see Appendix C for waste manifests). The soil was disposed of as non-hazardous-solid waste based on the results of the full TCLP analysis. Soil removal began on 22 November 1996 and was completed on 9 December 1996. 811 tons of soil (based on landfill weight tickets) were removed from the Pond.

During the excavation process the former drain lines were cut-off and plugged at the point where they leave the pond. The concrete influent pad was cleaned and left in place. An active sewer line that ran beneath the southern berm was re-routed prior to commencement of field activities. The old sewer pipe was flushed by Dow, cut, removed and disposed of as a solid waste. Only the portion of the sewer line that was present in the area of the Pond was removed.

CONFIRMATION OF ACCEPTABLE CLOSURE, BASED ON OHIO EPA RISK-BASED CLOSURE STANDARDS

There were no detections above the Method Detection Limit (MDL) for PPL VOC and SVOC compounds for any of the eight soil samples underlying the rubber liner. In addition, there were no detections above TCLP limits for VOC, SVOC, pesticides, herbicides and metals for the one soil sample for disposal characterization.

The analytical results for the eight soil samples were to be compared to the OEPAs, Closure Plan Review Guidance, Interim Final-1993, values. This document, however, does not provide specific levels for individual constituents. Therefore, the analytical results were compared to readily-available USEPA Region V, RCRA Data Quality Level Table Update 1 (1995) risked-based values.

With the exception of the constituents listed below, none of the constituents exceeded the Data Quality Levels (DQL). Three volatile constituents (vinyl chloride, 1,1-dichloroethene, and acrylonitrile) were analyzed at detection limits above the DQL. Five semivolatile constituents [n-nitrosodimethylamine, bis-(2-chloroethyl) ether, dibenz(a,h) anthracene, benzo(a)pyrene and N-nitroso-di-n-propylamine] were analyzed at detection limits above the DQL. The MDLs for all eight constituents were evaluated and could not be adjusted to a lower value.

With the exception of the constituents listed above, none of the detections were above USEPA Region V, RCRA Data Quality Level Table Update 1 (1995) risked-based values. Dow completed the closure as a "clean" closure.

Backfilling of the pond commenced on 9 December 1996 and was completed on 19 December 1996. The material used to construct the berms for the Pond was used as partial backfill for the Pond. Material was moved, placed and compacted with a D5 dozer and 953 track loader. The pond was backfilled and graded to match the grade surrounding the pond with a southeastern sheet flow. Additional fill material (primarily sand) was purchased from a local source and delivered by BWC Trucking, Inc. to backfill the Pond. 11,011.87 tons of fill material (based on vendor weight tickets) were purchased to complete the backfilling of the Pond.

After the backfill was placed, the surface of the pond area was covered with a 6 inch base of top soil with a straw cover. Dow plans to plant grass in the spring of 1997. This was a change from the original plan to cover the surface of the pond with a 6 inch base of #57 limestone. The change was made at Dow's request for aesthetic reasons. A silt fence was placed along the southeast side of the Pond area to temporarily minimize soil run-off into the drainage ditch. The silt fence will be removed after the area has been seeded in the spring.

The Dow plant (Site) is situated upon the floodplain of the Ohio River at the western edge of the Appalachian Plateau physiographic province. The Appalachian Plateau is characterized by nearly horizontal or gently folded, elevated strata which have been eroded to create considerable relief.

The Site is situated on the north side of the Ohio River. Regional surface drainage is towards the Ohio River and its tributaries.

The regional unconsolidated deposit underlying the Site is described as river alluvium deposited by the Ohio River. The alluvium is up to 100 feet thick and generally consists of an upper and lower strata. The upper stratum is an interbedded clay, silt and clayey sand. The lower stratum is a fine to coarse grained sand with varying amounts of fine to medium gravel.

The lowland areas, or river valleys consolidated deposits consist of Mississippian age bedrock. These rocks are limestones, shales and sandstones.

The alluvial aquifer is contained within the sand and gravel stratum and is unconfined. The alluvial deposits, which are in hydraulic communication with the rivers, represent the major source of ground water in the region. Recharge to the alluvial aquifer comes principally from the upland areas adjacent to the river valley. Minimal recharge occurs within the alluvial deposits via infiltration due to the low permeability of the surficial soils. Flow direction within the alluvium is towards the Ohio River, which represents the discharge point of the aquifer.

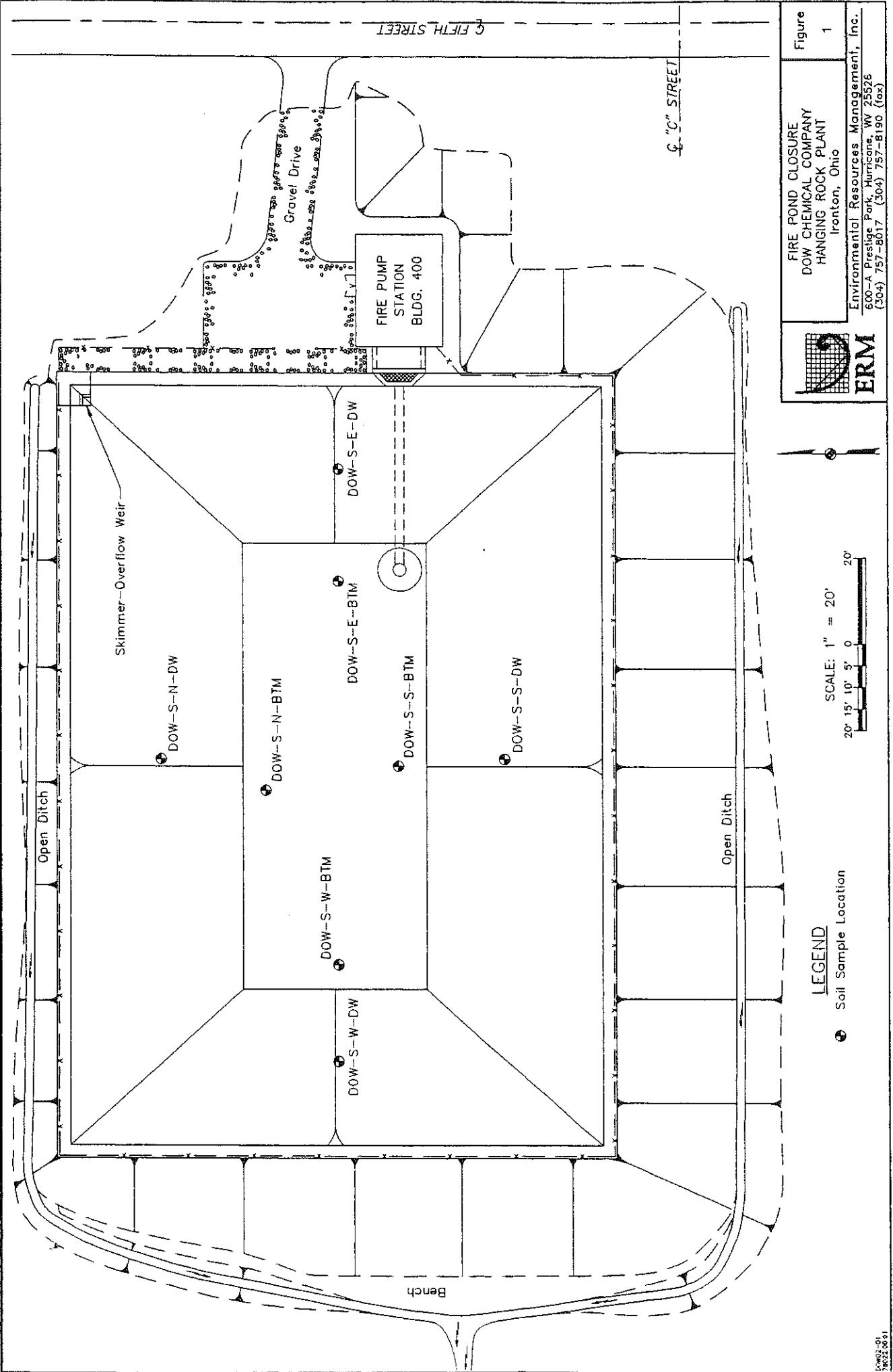
Based on limited subsurface investigations conducted at the Site, the unconsolidated deposits beneath the Site consist of alluvium. The alluvium consists of an upper and lower strata. The upper clay and sandy clay stratum is approximately 15 feet in thickness. The lower sand and gravel stratum is approximately 5 feet in thickness and extends to bedrock.

The soil samples obtained from the sidewalls and bottom of the Pond were described as silty clay to clayey silt with 5% to 25% fine grained sand.

The presence of the silty clay to clayey silt in the sidewalls and bottom of the Pond should act as an impermeable barrier to any constituent migration from the Pond. The analytical results (discussed in Section 4.0) indicate that there has been no impact on the soils directly underlying the liner. Due to the lack of constituents in the silty clay to clayey silt alluvium, most likely the lower sand and gravel stratum, which has higher permeability has not been impacted.

This report will be the final closure report for the SEP. Daily logs of construction activities are found in Appendix D. Photographs of construction activities are found in Appendix E. The total cost for this project was \$292,696.07. A separate certification of expenditures as defined in the SEP will be prepared by Dow for submittal to the EPA.

FIGURES



TABLES

TAE
PRIORITY POLLUTANT LIST VOLATILE ORGANIC COMPOUNDS
SOIL ANALYTICAL RESULTS
THE DOW CHEMICAL COMPANY
FIRE POND CLOSURE
HANGING ROCK PLANT
IRONTON, OHIO

SAMPLE LOCATION: DATE COLLECTED:	DOW-S-W-BTM 11/20/96	DOW-S-N-BTM 11/20/96	DOW-S-E-BTM 11/20/96	DOW-S-N-DW 11/6/96	DOW-S-E-DW 11/6/96	DOW-S-W-DW 11/6/96	MDL
VOLATILE ORGANIC COMPOUNDS (MG/KG)							
Chloromethane	ND	ND	ND	ND	ND	ND	0.63
Bromoethane	ND	ND	ND	ND	ND	ND	0.63
Vinyl Chloride	ND	ND	ND	ND	ND	ND	0.31
Chloroethane	ND	ND	ND	ND	ND	ND	0.63
Methylene Chloride	ND	ND	ND	ND	ND	ND	0.63
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	0.63
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	0.31
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	0.63
Chloroform	ND	ND	ND	ND	ND	ND	0.31
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	0.31
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	0.63
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	0.31
Bromodichloromethane	ND	ND	ND	ND	ND	ND	0.63
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	0.63
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	0.31
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	0.31
Trichloroethene	ND	ND	ND	ND	ND	ND	0.63
Dibromochloromethane	ND	ND	ND	ND	ND	ND	0.63
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	0.63
2-Chloroethyl Vinyl Ether	ND	ND	ND	ND	ND	ND	1.3
Bromoform	ND	ND	ND	ND	ND	ND	0.63
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	0.63
Tetrachloroethene	ND	ND	ND	ND	ND	ND	0.63
Benzene	ND	ND	ND	ND	ND	ND	0.63
Toluene	ND	ND	ND	ND	ND	ND	0.63
Ethylbenzene	ND	ND	ND	ND	ND	ND	0.63
Chlorobenzene	ND	ND	ND	ND	ND	ND	0.63
Acrylonitrile	ND	ND	ND	ND	ND	ND	0.31
Acrolein	ND	ND	ND	ND	ND	ND	6.3
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	0.63
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	0.63
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	0.63
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	0.63

ND - Not Detected at a concentration greater than the MDL (Method Detection Limit).

TAB
PRIORITY POLLUTANT LIST SEMIVOLATILE ORGANIC COMPOUNDS
SOIL ANALYTICAL RESULTS
THE DOW CHEMICAL COMPANY
FIRE POND CLOSURE
HANGING ROCK PLANT
IRONTON, OHIO

SAMPLE LOCATION: DATE COLLECTED:	DOW-S-W-BTM 11/20/96	DOW-S-BTM 11/20/96	DOW-S-N-BTM 11/20/96	DOW-S-E-BTM 11/20/96	DOW-S-S-DW 11/6/96	DOW-S-E-DW 11/6/96	DOW-S-W-DW 11/6/96	MDL
SEMOVOLATILE ORGANIC COMPOUNDS (MG/KG)								
Phenol	ND	ND	ND	ND	ND	ND	ND	0.33
2-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	0.33
2-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	0.33
2,4-Dimethylphenol	ND	ND	ND	ND	ND	ND	ND	0.33
2,4-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	0.33
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	ND	ND	0.33
2,4,6-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	0.33
2,4-Dinitrophenol	ND	ND	ND	ND	ND	ND	ND	1.7
4-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	1.7
2-Methyl-4,6-dinitrophenol	ND	ND	ND	ND	ND	ND	ND	1.7
Pentachlorophenol	ND	ND	ND	ND	ND	ND	ND	1.7
N-Nitrosodimethylamine	ND	ND	ND	ND	ND	ND	ND	1.7
bis(2-Chloroethyl)ether	ND	ND	ND	ND	ND	ND	ND	0.33
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.33
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.33
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.33
bis(2-Chloroisopropyl)ether	ND	ND	ND	ND	ND	ND	ND	0.33
N-Nitroso-di-n-propylamine	ND	ND	ND	ND	ND	ND	ND	0.67
Nitrobenzene	ND	ND	ND	ND	ND	ND	ND	0.33
Hexachlorobutane	ND	ND	ND	ND	ND	ND	ND	0.33
Isophorone	ND	ND	ND	ND	ND	ND	ND	0.33
bis(2-Chloroethoxy)methane	ND	ND	ND	ND	ND	ND	ND	0.33
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.33
Naphthalene	ND	ND	ND	ND	ND	ND	ND	0.33
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	0.33
Hexachlorocyclopentadiene	ND	ND	ND	ND	ND	ND	ND	0.33
2-Chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	0.33
Dimethylphthalate	ND	ND	ND	ND	ND	ND	ND	0.33
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	0.33
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	0.33
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	0.33
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	0.33
Fluorene	ND	ND	ND	ND	ND	ND	ND	0.33
4-Chlorophenyl-phenyl ether	ND	ND	ND	ND	ND	ND	ND	0.33
1,2-Diphenylyldiazine	ND	ND	ND	ND	ND	ND	ND	0.33

TAI

PRIORITY POLLUTANT LIST SEMIVOLATILE ORGANIC COMPOUNDS
 SOIL ANALYTICAL RESULTS
 THE DOW CHEMICAL COMPANY
 FIRE POND CLOSURE
 HANGING ROCK PLANT
 IRONTON, OHIO

SAMPLE LOCATION: DATE COLLECTED:	DOW-S-W-BTM 11/20/96	DOW-S-BTM 11/20/96	DOW-S-N-BTM 11/20/96	DOW-S-E-BTM 11/20/96	DOW-S-N-DW 11/6/96	DOW-S-E-DW 11/6/96	DOW-S-W-DW 11/6/96	MDL
SEMIVOLATILE ORGANIC COMPOUNDS (MC/KC)								
Diethylphthalate	ND	ND	ND	ND	ND	ND	ND	0.33
N-Nitrosodiphenylamine	ND	ND	ND	ND	ND	ND	ND	0.67
Hexachlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.28
4-Bromophenyl-phenyl ether	ND	ND	ND	ND	ND	ND	ND	0.33
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	0.33
Anthracene	ND	ND	ND	ND	ND	ND	ND	0.33
Di-n-butylphthalate	ND	ND	ND	ND	ND	ND	ND	0.33
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	0.33
Pyrene	ND	ND	ND	ND	ND	ND	ND	0.33
Benzidine	ND	ND	ND	ND	ND	ND	ND	1.7
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	0.33
Bis(2-Ethylhexyl)phthalate	ND	ND	ND	ND	ND	ND	ND	0.33
Chrysene	ND	ND	ND	ND	ND	ND	ND	0.33
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	ND	0.33
3,3'-Dichlorobenzidine	ND	ND	ND	ND	ND	ND	ND	0.99
Di-n-octylphthalate	ND	ND	ND	ND	ND	ND	ND	0.33
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	ND	0.33
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND	0.33
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	0.33
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	0.61
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	0.67
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	ND	0.67

ND - Not Detected at a concentration greater than the MDL (Method Detection Limit).

TABLE 2
TCLP ANALYTICAL RESULTS
SLUDGE AND SOIL SAMPLES
THE DOW CHEMICAL COMPANY
FIRE POND CLOSURE
HANGING ROCK PLANT
IRONTON, OHIO

SAMPLE LOCATION: DATE COLLECTED: PARAMETERS	Dow Sludge 1 11/6/96	Dow Soil 1 11/6/96	Limit of Quantification	Regulatory Limit
METALS (mg/l)				
Mercury	<0.0002	<0.0002	0.0002	0.2
Silver	<0.05	<0.05	0.05	5.0
Arsenic	<0.05	<0.05	0.05	5.0
Barium	2.63	1.13	0.01	100
Cadmium	<0.01	<0.01	0.01	1.0
Chromium	<0.01	<0.01	0.01	5.0
Copper	<0.01	<0.01	0.01	NA
Lead	<0.03	<0.03	0.03	5.0
Selenium	<0.05	<0.05	0.05	1.0
VOLATILES (ug/l)				
Vinyl Chloride	<10	<10	10	200
1,1-Dichloroethene	<5	<5	5	700
2-Butanone	<10	<10	10	200,000
Chloroform	<5	<5	5	6,000
Carbon Tetrachloride	<5	<5	5	500
Benzene	<5	<5	5	500
1,2-Dichloroethane	<5	<5	5	500
Trichloroethene	<5	<5	5	500
Tetrachloroethene	<5	<5	5	700
Chlorobenzene	<5	<5	5	100,000
1,4-Dichlorobenzene	<5	<5	5	7,500
SEMIVOLATILES (ug/l)				
2-Methylphenol	<20	<20	20	200,000
3-Methylphenol	<20	<20	20	200,000
4-Methylphenol	<20	<20	20	200,000
Pentachlorophenol	<20	<20	20	100,000
2,4,5-Trichlorophenol	<20	<20	20	400,000
2,4,6-Trichlorophenol	<20	<20	20	2,000
Hexachloroethane	<20	<20	20	3,000
Hexachlorobutadiene	<20	<20	20	500
Nitrobenzene	<20	<20	20	2,000
Hexachlorobenzene	<20	<20	20	130
2,4-Dinitrotoluene	<20	<20	20	130
Pyridine	<20	<20	20	5,000
PESTICIDES (ug/l)				
Gamma-BHC	<0.133	<0.133	0.133	NA
Heptachlor	<0.133	<0.133	0.133	8.0
Heptachlor epoxide	<0.133	<0.133	0.133	8.0
Endrin	<0.667	<0.667	0.677	20
Methoxychlor	<6.67	<6.67	6.67	10,000
Toxaphene	<6.67	<6.67	6.67	500
HERBICIDES (ug/l)				
2,4-D	<0.5	<0.5	0.5	10,000
Silvex	<0.167	<0.167	0.167	1,000
ADDITIONAL PROPERTY METERS				
Cyanide-reactive (mg/Kg) (dry)	<0.193	<0.0967 (1)	0.193	
Corrosivity (pH units)	7.62	8.42	0	
Flash point (degrees F)	>140	>140	140	
Free liquid (-)	NO	NO	0	
Percent solids (%)	41.15	85.36	0.01	
pH (pH units)	7.62	8.42	0	
Reactive sulfide (mg/Kg) (dry)	32.9	18 (2)	6.33	

(1) LOQ = 0.0967

(2) LOQ = 3.39

TAF
COMPARISON OF RISK BASED VALUES v VOLATILE ORGANIC COMPOUNDS
SOIL ANALYTICAL RESULTS
THE DOW CHEMICAL COMPANY
FIRE POND CLOSURE
HANGING ROCK PLANT

SAMPLE LOCATION: DATE COLLECTED:	DOW-S-W-BTM 11/20/96	DOW-S-E-BTM 11/20/96	DOW-S-N-BTM 11/20/96	DOW-S-E-BTM 11/20/96	DOW-S-N-DW 11/6/96	DOW-S-E-DW 11/6/96	DOW-S-W-DW 11/6/96	MDL ($\mu\text{g}/\text{kg}$)	Data Quality Level ($\mu\text{g}/\text{kg}$)	MRL ($\mu\text{g}/\text{kg}$)
VOLATILE ORGANIC COMPOUNDS (MG/KG)										
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	310	5.2
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	630	1,100,000
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	630	11,000
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	630	38
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	310	840,000
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	630	170,000
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	310	530
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	310	440
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	630	3,200,000
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	310	470
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	630	1,400
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	630	680
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	310	510
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	310	510
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	630	7,100
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	630	5,300
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	630	1,400
2-Chloroethyl Vinyl Ether	ND	ND	ND	ND	ND	ND	ND	ND	630	NA
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	630	56,000
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	630	900
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	630	7,000
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	630	1,400
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	630	1,900,000
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	630	2,900,000
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	630	160,000
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	310	130
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	6,300	1,300,000
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	630	2,300,000
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	630	2,800,000
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	630	7,400
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	630	710,000

ND - Not Detected at a concentration greater than the MDL (Method Detection Limit).

TAI

**COMPARISON OF RISK BASED VALUES SEMIVOLATILE ORGANIC COMPOUNDS
SOIL ANALYTICAL RESULTS
THE DOW CHEMICAL COMPANY
FIRE POND CLOSURE
HANGING ROCK PLANT
IRONTON, OHIO**

SAMPLE LOCATION: DATE COLLECTED:	DOW-S-W-BTM 11/20/96	DOW-S-S-BTM 11/20/96	DOW-S-N-BTM 11/20/96	DOW-S-E-BTM 11/20/96	DOW-S-N-DW 11/6/96	DOW-S-E-DW 11/6/96	DOW-S-W-DW 11/6/96	DOW-S-E-DW 11/6/96	DOW-S-W-DW 11/6/96	MDL	Data Quality Level ($\mu\text{g}/\text{kg}$)	MRL ($\mu\text{g}/\text{kg}$)
										($\mu\text{g}/\text{kg}$)		
SEMOVOLATILE ORGANIC COMPOUNDS ($\mu\text{g}/\text{kg}$)												
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	39,000,000	660
2-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	330,000	660
2-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	NA	NA
2,4-Dimethylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	1,300,000	660
2,4-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	200,000	660
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	NA	NA
2,4,6-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	40,000	660
2,4-Dinitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,700	130,000	3,300
4-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,700	NA	NA
2-Methyl-4,6-dinitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,700	NA	NA
Pentachlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,700	2,500	3,300
N-Nitrosodimethylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,700	20	-----
bis(2-Chloroethyl)ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	74	660
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	2,800,000	5
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	7,400	5
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	2,300,000	5
bis(2-Chloroisopropyl)ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	NA	NA
N-Nitroso-di-n-Propylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	670	63	660
Nitrobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	33,000	660
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	32,000	660
Isophorone	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	470,000	660
bis(2-Chloroethoxy)methane	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	NA	NA
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	620,000	660
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	800,000	660
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	5,700	660
Hexachlorocyclopentadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	450,000	660
2-Chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	5,200,000	660
Dimethylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	>1 X 10+8	660
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	NA	NA
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	360,000	660
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	65,000	660
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	130,000	660
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	300,000	660
4-Chlorophenyl-phenyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	NA	NA
1,2-Diphenylhydrazine	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	NA	NA

TAB
COMPARISON OF RISK BASED VALUES SEMIVOLATILE ORGANIC COMPOUNDS
SOIL ANALYTICAL RESULTS
THE DOW CHEMICAL COMPANY
FIRE POND CLOSURE
HANGING ROCK PLANT
IRONTON, OHIO

SAMPLE LOCATION: DATE COLLECTED:	DOW-S-W-BTM 11/20/96	DOW-S-S-BTM 11/20/96	DOW-S-E-BTM 11/20/96	DOW-S-N-BTM 11/6/96	DOW-S-E-DW 11/6/96	DOW-S-S-DW 11/6/96	DOW-S-E-DW 11/6/96	DOW-S-S-DW 11/6/96	MDL (ug/kg)	Data Quality Level (ug/kg)	MRL (ug/kg)
SEMIVOLATILE ORGANIC COMPOUNDS (UG/KG)	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	52,000,000
Diethylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	670	NA
N-Nitrosodiphenylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	280	280
Hexachlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	NA
4-Bromophenyl-phenyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	NA
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	NA
Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	19,000
Di-n-butylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	NA
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	2,600,000
Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	2,000,000
Benzidine	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,700	NA
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	13,000,000
bis(2-Ethylhexyl)phthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	32,000
Chrysene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	24,000
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	610
3,3'-Dichlorobenzidine	ND	ND	ND	ND	ND	ND	ND	ND	ND	990	1,300
Di-n-octylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	1,300,000
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	610
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	6,100
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	330	61
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	610	660
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	670	61
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	670	NA

Not Detected at a concentration greater than the MDL (Method Detection Limit).

APPENDICES

APPENDIX A

Soil Analytical Results (PPL-VOCs & SVOCs)



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-002 Respectfully
Submitted:

DOW-S-N-OW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 14:30
Date Received 11/07/96

Sampled by CLIENT

R013097 1344

H.N. Wright

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST	
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
Vinyl chloride[75-01-4]	ND	0.31	mg/Kg	SW8240	11/12/96	14:02 MAM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
1,1-Dichloroethene[75-35-4]	ND	0.31	mg/Kg	SW8240	11/12/96	14:02 MAM
1,1-Dichloroethane[75-34-3]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
Chloroform[67-66-3]	ND	0.31	mg/Kg	SW8240	11/12/96	14:02 MAM
1,2-Dichloroethane[107-06-2]	ND	0.31	mg/Kg	SW8240	11/12/96	14:02 MAM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
Carbon tetrachloride[56-23-5]	ND	0.31	mg/Kg	SW8240	11/12/96	14:02 MAM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.31	mg/Kg	SW8240	11/12/96	14:02 MAM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.31	mg/Kg	SW8240	11/12/96	14:02 MAM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
Dibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/12/96	14:02 MAM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
Acrylonitrile[107-13-1]	ND	0.31	mg/Kg	SW8240	11/12/96	14:02 MAM
Acrolein[107-02-8]	ND	6.3	mg/Kg	SW8240	11/12/96	14:02 MAM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/12/96	14:02 MAM

Continued on next page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-002 Respectfully
Submitted:

DOW-S-N-O-W GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 14:30
Date Received 11/07/96

Sampled by CLIENT

H.M. Wright
R013097 1344
PAGE 2

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Trichlorofluoromethane[75-69-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
SURROGATE RECOVERY - VOLATILE FRACTION					
1,2-Dichloroethane-d4 <SURROGATE>	99	-----	% REC	SW8240	11/12/96 14:02 MAM
Toluene-d8 <SURROGATE>	103	-----	% REC	SW8240	11/12/96 14:02 MAM
Bromofluorobenzene <SURROGATE>	104	-----	% REC	SWB240	11/12/96 14:02 MAM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
4643 Benson Avenue, Baltimore, MD 21227-1410 — Tel: (410) 247-7400 Fax: (410) 247-7402
4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-003 Respectfully
Submitted:

DDW-S-S-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:55
Date Received 11/07/96

Sampled by CLIENT

R013097 1344

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Vinyl chloride[75-01-4]	ND	0.31	mg/Kg	SW8240	11/12/96 14:43 MAM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,1-Dichloroethene[75-35-4]	ND	0.31	mg/Kg	SW8240	11/12/96 14:43 MAM
1,1-Dichloroethane[75-34-3]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Chloroform[67-66-3]	ND	0.31	mg/Kg	SW8240	11/12/96 14:43 MAM
1,2-Dichloroethane[107-06-2]	ND	0.31	mg/Kg	SW8240	11/12/96 14:43 MAM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Carbon tetrachloride[56-23-5]	ND	0.31	mg/Kg	SW8240	11/12/96 14:43 MAM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.31	mg/Kg	SW8240	11/12/96 14:43 MAM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.31	mg/Kg	SW8240	11/12/96 14:43 MAM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Dibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/12/96 14:43 MAM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Acrylonitrile[107-13-1]	ND	0.31	mg/Kg	SW8240	11/12/96 14:43 MAM
Acrolein[107-02-8]	ND	6.3	mg/Kg	SW8240	11/12/96 14:43 MAM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM

Continued on next page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-003 Respectfully
Submitted:

DOW-S-S-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:55
Date Received 11/07/96

Sampled by CLIENT

H.M. Wright
R013097 1344
PAGE 2

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Trichlorofluoromethane [75-69-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
SURROGATE RECOVERY - VOLATILE FRACTION					
1,2-Dichloroethane-d4 <SURROGATE>	97	-----	% REC	SW8240	11/12/96 14:43 MAM
Toluene-d8 <SURROGATE>	102	-----	% REC	SW8240	11/12/96 14:43 MAM
Bromofluorobenzene <SURROGATE>	101	-----	% REC	SW8240	11/12/96 14:43 MAM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-004 Respectfully
Submitted:

DOW-S-E-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:15
Date Received 11/07/96

Sampled by CLIENT

R013097 1344

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	ANALYZED	
				METHOD	DATE/TIME/ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Vinyl chloride[75-01-4]	ND	0.31	mg/Kg	SW8240	11/12/96 15:23 MAM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,1-Dichloroethene[75-35-4]	ND	0.31	mg/Kg	SW8240	11/12/96 15:23 MAM
1,1-Dichloroethane[75-34-3]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Chloroform[67-66-3]	ND	0.31	mg/Kg	SW8240	11/12/96 15:23 MAM
1,2-Dichloroethane[107-06-2]	ND	0.31	mg/Kg	SW8240	11/12/96 15:23 MAM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Carbon tetrachloride[56-23-5]	ND	0.31	mg/Kg	SW8240	11/12/96 15:23 MAM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.31	mg/Kg	SW8240	11/12/96 15:23 MAM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.31	mg/Kg	SW8240	11/12/96 15:23 MAM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Dibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/12/96 15:23 MAM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Acrylonitrile[107-13-1]	ND	0.31	mg/Kg	SW8240	11/12/96 15:23 MAM
Acrolein[107-02-8]	ND	6.3	mg/Kg	SW8240	11/12/96 15:23 MAM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-004 Respectfully
Submitted:

DDW-S-E-DW GRAB
DOW HANGING RDCK, OHIO

Date Sampled 11/06/96 13:15
Date Received 11/07/96

Sampled by CLIENT

R013097 1344
PAGE 2

J.N. Wright

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPRT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Trichlorofluoromethane[75-69-4]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
SURROGATE RECOVERY - VOLATILE FRACTION					
1,2-Dichloroethane-d4 <SURROGATE>	101	-----	% REC	SW8240	11/12/96 15:23 MAM
Toluene-d8 <SURROGATE>	105	-----	% REC	SW8240	11/12/96 15:23 MAM
Bromofluorobenzene <SURROGATE>	109	-----	% REC	SW8240	11/12/96 15:23 MAM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-005 Respectfully
Submitted:

DOW-S-W-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 14:15
Date Received 11/07/96

Sampled by CLIENT

H.M. Wright
R013197 D922

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	ANALYZED	
				METHOD	DATE/TIME/ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Vinyl chloride[75-01-4]	ND	0.31	mg/Kg	SW8240	11/12/96 16:04 MAM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,1-Dichloroethene[75-35-4]	ND	0.31	mg/Kg	SW8240	11/12/96 16:04 MAM
1,1-Dichloroethane[75-34-3]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Chloroform[67-66-3]	ND	0.31	mg/Kg	SW8240	11/12/96 16:04 MAM
1,2-Dichloroethane[107-06-2]	ND	0.31	mg/Kg	SW8240	11/12/96 16:04 MAM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Carbon tetrachloride[56-23-5]	ND	0.31	mg/Kg	SW8240	11/12/96 16:04 MAM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.31	mg/Kg	SW8240	11/12/96 16:04 MAM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.31	mg/Kg	SW8240	11/12/96 16:04 MAM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Dibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/12/96 16:04 MAM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Acrylonitrile[107-13-1]	ND	0.31	mg/Kg	SW8240	11/12/96 16:04 MAM
Acrolein[107-02-8]	ND	6.3	mg/Kg	SW8240	11/12/96 16:04 MAM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM

Continued on next page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-005 Respectfully
Submitted:

DOW-S-W-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 14:15
Date Received 11/07/96

Sampled by CLIENT

R013197 0922
PAGE 2

J.M. Wright

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Trichlorofluoromethane [75-69-4]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
SURROGATE RECOVERY - VOLATILE FRACTION					
1,2-Dichloroethane-d4 <SURROGATE>	99	-----	% REC	SW8240	11/12/96 16:04 MAM
Toluene-d8 <SURROGATE>	104	-----	% REC	SW8240	11/12/96 16:04 MAM
Bromofluorobenzene <SURROGATE>	108	-----	% REC	SW8240	11/12/96 16:04 MAM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-002 Respectfully
Submitted:

DOW-S-N-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 14:30
Date Received 11/07/96

Sampled by CLIENT

J.N. Wright
111896 1535

ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	ANALYZED	
				METHOD	DATE/TIME/ANALYST
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
2-Chlorophenol [95-57-8]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
4-Chloro-3-methylphenol [59-50-7]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
2,4-Dinitrophenol [51-28-5]	ND	1.7	mg/Kg	SW8270	11/08/96 20:42 JER
4-Nitrophenol [100-02-7]	ND	1.7	mg/Kg	SW8270	11/08/96 20:42 JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/08/96 20:42 JER
Pentachlorophenol [87-86-5]	ND	1.7	mg/Kg	SW8270	11/08/96 20:42 JER
SURROGATE RECOVERY - ACID FRACTION					
2-Fluorophenol <SURROGATE>	42	-----	% REC	SW8270	11/08/96 20:42 JER
Phenol-d6 <SURROGATE>	45	-----	% REC	SW8270	11/08/96 20:42 JER
2,4,6-Tribromophenol <SURROGATE>	59	-----	% REC	SW8270	11/08/96 20:42 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-002 Respectfully
Submitted:

DOW-S-N-DW GRAB
DDW HANGING ROCK, OHIO

Date Sampled 11/06/96 14:30
Date Received 11/07/96

Sampled by CLIENT

R013097 1402

H.M. Wright

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/08/96 20:42 JER
Bis(2-chloroethyl)ether[111-44-4]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
1,3-Dichlorobenzene[541-73-1]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
1,4-Dichlorobenzene[106-46-7]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Bis(2-chloroisopropyl)ether[108-6D-1]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/08/96 20:42 JER
Nitrobenzene[98-95-3]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Hexachloroethane[67-72-1]	ND	0.28	mg/Kg	SW8270	11/08/96 20:42 JER
Isophorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Naphthalene[91-20-3]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Hexachlorocyclopentadiene[77-47-4]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Dimethyl phthalate[131-11-3]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Acenaphthylene[208-96-8]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Acenaphthene[83-32-9]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
2,6-Dinitrotoluene[606-20-2]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Fluorene[86-73-7]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
1,2-Diphenylhydrazine[122-66-7]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
N-Nitrosodiphenylamine[86-30-6]	ND	0.67	mg/Kg	SW8270	11/08/96 20:42 JER
Hexachlorobenzene[118-74-1]	ND	0.28	mg/Kg	SW8270	11/08/96 20:42 JER
4-Bromophenyl phenyl ether[101-55-3]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Anthracene[120-12-7]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Di-n-butyl phthalate[84-74-2]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER

Continued on next page

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-002 Respectfully
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H.M. Wright
R013097 1402
PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Fluoranthene[206-44-0]	ND	0.33	mg/Kg	SWB270	11/08/96 20:42 JER
Pyrene[129-00-0]	ND	0.33	mg/Kg	SWB270	11/08/96 20:42 JER
Benzidine[92-87-5]	ND	1.7	mg/Kg	SWB270	11/08/96 20:42 JER
Butyl benzyl phthalate[85-68-7]	ND	0.33	mg/Kg	SWB270	11/08/96 20:42 JER
Bis(2-ethylhexyl)phthalate[117-81-7]	ND	0.33	mg/Kg	SWB270	11/08/96 20:42 JER
Chrysene[218-01-9]	ND	0.33	mg/Kg	SWB270	11/08/96 20:42 JER
Benzo(a)anthracene[56-55-3]	ND	0.33	mg/Kg	SWB270	11/08/96 20:42 JER
3,3'-Oichlorobenzidine[91-94-1]	ND	0.99	mg/Kg	SWB270	11/08/96 20:42 JER
Di-n-octylphthalate[117-84-0]	ND	0.33	mg/Kg	SWB270	11/08/96 20:42 JER
Benzo(b)fluoranthene[205-99-2]	ND	0.33	mg/Kg	SWB270	11/08/96 20:42 JER
Benzo(k)fluoranthene[207-08-9]	ND	0.33	mg/Kg	SWB270	11/08/96 20:42 JER
Benzo(a)pyrene[50-32-8]	ND	0.33	mg/Kg	SWB270	11/08/96 20:42 JER
Indeno(1,2,3-cd)pyrene[193-39-5]	ND	0.61	mg/Kg	SWB270	11/08/96 20:42 JER
Dibenzo(a,h)anthracene[53-70-3]	ND	0.67	mg/Kg	SWB270	11/08/96 20:42 JER
Benzo(ghi)perylene[191-24-2]	ND	0.67	mg/Kg	SWB270	11/08/96 20:42 JER
SURROGATE RECOVERY - BASE/NEUT FRACTION					
Nitrobenzene-d5<SURROGATE>	49	-----	% REC	SWB270	11/08/96 20:42 JER
2-Fluorobiphenyl<SURROGATE>	45	-----	% REC	SWB270	11/08/96 20:42 JER
o-Terphenyl<SURROGATE>	55	-----	% REC	SWB270	11/08/96 20:42 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-003 Respectfully
Submitted:

DOW-S-S-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:55
Date Received 11/07/96

Sampled by CLIENT

H. M. Wright
111896 1535

ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MOL	UNITS	ANALYZED	
				METHOD	DATE/TIME/ANALYST
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2-Chlorophenol [95-57-8]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
4-Chloro-3-methylphenol [59-50-7]	NO	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2,4,6-Trichlorophenol [88-06-2]	NO	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2,4-Dinitrophenol [51-28-5]	NO	1.7	mg/Kg	SW8270	11/08/96 21:33 JER
4-Nitrophenol [100-02-7]	NO	1.7	mg/Kg	SW8270	11/08/96 21:33 JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/08/96 21:33 JER
Pentachlorophenol [87-86-5]	ND	1.7	mg/Kg	SW8270	11/08/96 21:33 JER
SURROGATE RECOVERY - ACID FRACTION					
2-Fluorophenol <SURROGATE>	59	-----	% REC	SW8270	11/08/96 21:33 JER
Phenol-d6 <SURROGATE>	61	-----	% REC	SW8270	11/08/96 21:33 JER
2,4,6-Tribromophenol <SURROGATE>	83	-----	% REC	SW8270	11/08/96 21:33 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-003 Respectfully
Submitted:

DOW-S-S-DW GRAB
DDW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:55
Date Received 11/07/96

Sampled by CLIENT

R013097 1403

H.N. Wright

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/08/96 21:33 JER
Bis(2-chloroethyl)ether[111-44-4]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
1,3-Dichlorobenzene[541-73-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
1,4-Dichlorobenzene[106-46-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Bis(2-chloroisopropyl)ether[108-60-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/08/96 21:33 JER
Nitrobenzene[98-95-3]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Hexachloroethane[67-72-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Isophorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Naphthalene[91-20-3]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Hexachlorocyclopentadiene[77-47-4]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Dimethyl phthalate[131-11-3]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Acenaphthylene[208-96-8]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Acenaphthene[83-32-9]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2,6-Dinitrotoluene[606-20-2]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Fluorene[86-73-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
1,2-Diphenylhydrazine[122-66-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
N-Nitrosodiphenylamine[86-30-6]	ND	0.67	mg/Kg	SW8270	11/08/96 21:33 JER
Hexachlorobenzene[118-74-1]	ND	0.28	mg/Kg	SW8270	11/08/96 21:33 JER
4-Bromophenyl phenyl ether[101-55-3]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Anthracene[120-12-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Di-n-butyl phthalate[84-74-2]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER

Continued on next page

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-003 Respectfully
Submitted:

DOW-S-S-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:55
Date Received 11/07/96

Sampled by CLIENT

R013097 1403
PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Fluoranthene [206-44-0]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Pyrene [129-00-0]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Benzidine [92-87-5]	ND	1.7	mg/Kg	SW8270	11/08/96 21:33 JER
Butyl benzyl phthalate [85-68-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Bis(2-ethylhexyl)phthalate [117-81-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Chrysene [218-01-9]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Benzo(a)anthracene [56-55-3]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
3,3'-Dichlorobenzidine [91-94-1]	ND	0.99	mg/Kg	SW8270	11/08/96 21:33 JER
Di-n-octylphthalate [117-84-0]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Benzo(b)fluoranthene [205-99-2]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Benzo(k)fluoranthene [207-08-9]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Benzo(a)pyrene [50-32-8]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Indeno(1,2,3-cd)pyrene [193-39-5]	ND	0.61	mg/Kg	SW8270	11/08/96 21:33 JER
Dibenzo(a,h)anthracene [53-70-3]	ND	0.67	mg/Kg	SW8270	11/08/96 21:33 JER
Benzo(ghi)perylene [191-24-2]	ND	0.67	mg/Kg	SW8270	11/08/96 21:33 JER
SURROGATE RECOVERY - BASE/NEUT FRACTION					
Nitrobenzene-d5<SURROGATE>	67	-----	% REC	SW8270	11/08/96 21:33 JER
2-Fluorobiphenyl <SURROGATE>	65	-----	% REC	SW8270	11/08/96 21:33 JER
o-Terphenyl <SURROGATE>	65	-----	% REC	SW8270	11/08/96 21:33 JER

ND: Not detected at a concentration greater than the MOL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-004 Respectfully
Submitted:

DOW-S-E-DW GRAB
DDW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:15
Date Received 11/07/96

Sampled by CLIENT

111896 1535

ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED	
					DATE/TIME	ANALYST
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
2-Chlorophenol [95-57-8]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
4-Chloro-3-methylphenol [59-50-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
2,4-Dinitrophenol [51-28-5]	ND	1.7	mg/Kg	SW8270	11/08/96 22:25	JER
4-Nitrophenol [100-02-7]	ND	1.7	mg/Kg	SW8270	11/08/96 22:25	JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/08/96 22:25	JER
Pentachlorophenol [87-86-5]	ND	1.7	mg/Kg	SW8270	11/08/96 22:25	JER
SURROGATE RECOVERY - ACID FRACTION						
2-Fluorophenol <SURROGATE>	59	-----	% REC	SW8270	11/08/96 22:25	JER
Phenol-d6 <SURROGATE>	62	-----	% REC	SW8270	11/08/96 22:25	JER
2,4,6-Tribromophenol <SURROGATE>	81	-----	% REC	SW8270	11/08/96 22:25	JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-004 Respectfully
Submitted:

DDW-S-E-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:15
Date Received 11/07/96

Sampled by CLIENT

R013097 1403

H.M. Wright

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISEO REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED	
					DATE/TIME	ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/08/96 22:25	JER
Bis(2-chloroethyl)ether[111-44-4]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
1,3-Dichlorobenzene[541-73-1]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
1,4-Dichlorobenzene[106-46-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Bis(2-chloroisopropyl)ether[108-60-1]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/08/96 22:25	JER
Nitrobenzene[98-95-3]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Hexachloroethane[67-72-1]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Isophorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Naphthalene[91-20-3]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Hexachlorocyclopentadiene[77-47-4]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Dimethyl phthalate[131-11-3]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Acenaphthylene[208-96-8]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Acenaphthene[83-32-9]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
2,6-Dinitrotoluene[606-20-2]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Fluorene[86-73-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
1,2-Diphenylhydrazine[122-66-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
N-Nitrosodiphenylamine[86-30-6]	ND	0.67	mg/Kg	SW8270	11/08/96 22:25	JER
Hexachlorobenzene[118-74-1]	ND	0.28	mg/Kg	SW8270	11/08/96 22:25	JER
4-Bromophenyl phenyl ether[101-55-3]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Anthracene[120-12-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Di-n-butyl phthalate[84-74-2]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER

Continued on next page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-004 Respectfully
Submitted:

DOW-S-E-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:15
Date Received 11/07/96

Sampled by CLIENT

H.M. Wright
R013097 1403
PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Fluoranthene [206-44-0]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Pyrene [129-00-0]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Benzidine [92-87-5]	ND	1.7	mg/Kg	SW8270	11/08/96 22:25 JER
Butyl benzyl phthalate [85-68-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Bis(2-ethylhexyl)phthalate [117-81-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Chrysene [218-01-9]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Benzo(a)anthracene [56-55-3]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
3,3'-Dichlorobenzidine [91-94-1]	ND	0.99	mg/Kg	SW8270	11/08/96 22:25 JER
Di-n-octylphthalate [117-84-0]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Benzo(b)fluoranthene [205-99-2]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Benzo(k)fluoranthene [207-08-9]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Benzo(a)pyrene [50-32-8]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Indeno(1,2,3-cd)pyrene [193-39-5]	ND	0.61	mg/Kg	SW8270	11/08/96 22:25 JER
Dibenzo(a,h)anthracene [53-70-3]	ND	0.67	mg/Kg	SW8270	11/08/96 22:25 JER
Benzo(ghi)perylene [191-24-2]	ND	0.67	mg/Kg	SW8270	11/08/96 22:25 JER
SURROGATE RECOVERY - BASE/NEUT FRACTION					
Nitrobenzene-d5 <SURROGATE>	66	-----	% REC	SW8270	11/08/96 22:25 JER
2-Fluorobiphenyl <SURROGATE>	65	-----	% REC	SW8270	11/08/96 22:25 JER
o-Terphenyl <SURROGATE>	63	-----	% REC	SW8270	11/08/96 22:25 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-005 Respectfully
Submitted:

DOW-S-W-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 14:15
Date Received 11/07/96

Sampled by CLIENT

111896 1535

H. M. Wright

ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED	
					DATE/TIME	ANALYST
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16	JER
2-Chlorophenol [95-57-8]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16	JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16	JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16	JER
2,4-Dichlorophenol [120-83-2]	NO	0.33	mg/Kg	SW8270	11/08/96 23:16	JER
4-Chloro-3-methylphenol [59-50-7]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16	JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16	JER
2,4-Dinitrophenol [51-28-5]	ND	1.7	mg/Kg	SW8270	11/08/96 23:16	JER
4-Nitrophenol [100-02-7]	ND	1.7	mg/Kg	SW8270	11/08/96 23:16	JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/08/96 23:16	JER
Pentachlorophenol [87-86-5]	ND	1.7	mg/Kg	SW8270	11/08/96 23:16	JER
SURROGATE RECOVERY - ACID FRACTION						
2-Fluorophenol <SURROGATE>	62	-----	% REC	SW8270	11/08/96 23:16	JER
Phenol-d6 <SURROGATE>	63	-----	% REC	SW8270	11/08/96 23:16	JER
2,4,6-Tribromophenol <SURROGATE>	90	-----	% REC	SW8270	11/08/96 23:16	JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-005 Respectfully
Submitted:

DOW-S-W-OW GRAB
DOW HANGING RDCK, OHIO

Date Sampled 11/06/96 14:15
Date Received 11/07/96

Sampled by CLIENT

H. N. Wright
R013197 0923

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE DN AN AS RECEIVED BASIS

REVISED REPRT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/08/96 23:16 JER
Bis(2-chloroethyl)ether[111-44-4]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
1,3-Dichlorobenzene[541-73-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
1,4-Dichlorobenzene[106-46-7]	NO	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Bis(2-chloroisopropyl)ether[108-60-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/08/96 23:16 JER
Nitrobenzene[98-95-3]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Hexachloroethane[67-72-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Isophorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Naphthalene[91-20-3]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Hexachlorocyclopentadiene[77-47-4]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Dimethyl phthalate[131-11-3]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Acenaphthylene[208-96-8]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Acenaphthene[83-32-9]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
2,6-Dinitrotoluene[606-20-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Fluorene[86-73-7]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
1,2-Diphenylhydrazine[122-66-7]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
N-Nitrosodiphenylamine[86-30-6]	NO	0.67	mg/Kg	SW8270	11/08/96 23:16 JER
Hexachlorobenzene[118-74-1]	NO	0.28	mg/Kg	SW8270	11/08/96 23:16 JER
4-Bromophenyl phenyl ether[101-55-3]	NO	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Anthracene[120-12-7]	NO	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Di-n-butyl phthalate[84-74-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER

Continued on next page

3

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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-005 Respectfully
Submitted:

DOW-S-W-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 14:15
Date Received 11/07/96

Sampled by CLIENT

R013197 0923
PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPRT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Fluoranthene[206-44-0]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Pyrene[129-00-0]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Benzidine[92-87-5]	ND	1.7	mg/Kg	SW8270	11/08/96 23:16 JER
Butyl benzyl phthalate[85-68-7]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Bis(2-ethylhexyl)phthalate[117-81-7]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Chrysene[218-01-9]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Benzo(a)anthracene[56-55-3]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
3,3'-Dichlorobenzidine[91-94-1]	ND	0.99	mg/Kg	SW8270	11/08/96 23:16 JER
Di-n-octylphthalate[117-84-0]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Benzo(b)fluoranthene[205-99-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Benzo(k)fluoranthene[207-08-9]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Benzo(a)pyrene[50-32-8]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Indeno(1,2,3-cd)pyrene[193-39-5]	ND	0.61	mg/Kg	SW8270	11/08/96 23:16 JER
Dibenzo(a,h)anthracene[53-70-3]	ND	0.67	mg/Kg	SW8270	11/08/96 23:16 JER
Benzo(ghi)perylene[191-24-2]	ND	0.67	mg/Kg	SW8270	11/08/96 23:16 JER
SURROGATE RECOVERY - BASE/NEUT FRACTDN					
Nitrobenzene-d5<SURROGATE>	71	-----	% REC	SW8270	11/08/96 23:16 JER
2-Fluorobiphenyl<SURROGATE>	69	-----	% REC	SW8270	11/08/96 23:16 JER
o-Terphenyl<SURROGATE>	69	-----	% REC	SW8270	11/08/96 23:16 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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CHAIN OF CUSTODY RECORD

CT&E Environmental Services Inc.
Laboratory Division

Locations Nation
 • Alaska • MI. •
 • California • New Jersey
 • Florida • Ohio
 • Illinois • Pennsylvania
 • Maryland • West Virginia
 • Michigan

① CLIENT: ERN, Inc.		PHONE NO: (304) 757-8077		PAGE 1 OF 1	
CONTACT: P. Gebhard		SITE: Hungry Rock, Ohio			
PROJECT: Dow					
REPORTS TO: Above		FAX NO: (304) 757-8190			
INVOICE TO: Above		P.O. NUMBER: 7802200.01			
② LAB NO.		SAMPLE IDENTIFICATION	DATE	TIME	MATRIX
TB-W-1		11/6/96	/	W	1
Dow-S-N-DW		"	1430	Soil	2
Dow-S-S-DW		"	1355	Soil	2
Dow-S-E-DW		"	1315	Soil	2
Dow-S-W-DW		"	1415	Soil	2
Dow-S-N-Btm		"	1425	Soil	2
Dow-S-S-Btm		"	1345	Soil	2
Dow-S-E-Btm		"	1300	Soil	2
Dow-S-W-Btm		"	1405	Soil	2
⑤ Collected / Relinquished By: (1)		Date 11/6/96	Time 1200	Received By: ERN Refrigerator	
Relinquished By: (2)		Date 11/7/96	Time	Received By:	
Relinquished By: (3)		Date	Time	Received By:	
Relinquished By: (4)		Date 11/7/96	Time 0935	Received For Laboratory By: <i>John Brund</i>	
③		PP-L-VLC		Samples Received Cold? (Circle) YES NO	
④		PP-L-SVLC		Temperature °C: 30	
⑤		Shipping Carrier: C.L.S.27		Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT	
⑥		Shipping Ticket No:		Data Deliverables Required Level I Level II Level III	
⑦		Requested Turnaround Time and Special Instructions: <i>Standard 1</i>			


CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

 P. Gebhard
 ERM, INC.

 Laboratory Number 296-11-0509-001 Respectfully
 Submitted:

 DOW-S-W-BTM GRAB
 DOW HANGING ROCK, OHIO

 Date Sampled 11/20/96 14:00
 Date Received 11/20/96

 Sampled by CLIENT
 PO # 78022.00.01

H.N. Wright
 R013097 1334

 PRIORITY POLLUTANTS:VOLATILE FRACTION
 Purge/Trap/Desorb
 ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Vinyl chloride[75-01-4]	ND	0.31	mg/Kg	SW8240	11/21/96 18:25 PLM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,1-Dichloroethene[75-35-4]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,1-Dichloroethane[75-34-3]	ND	0.31	mg/Kg	SW8240	11/21/96 18:25 PLM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Chloroform[67-66-3]	ND	0.31	mg/Kg	SW8240	11/21/96 18:25 PLM
1,Z-Dichloroethane[107-06-2]	ND	0.31	mg/Kg	SW8240	11/21/96 18:25 PLM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Carbon tetrachloride[56-23-5]	ND	0.31	mg/Kg	SW8240	11/21/96 18:25 PLM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.31	mg/Kg	SW8240	11/21/96 18:25 PLM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.31	mg/Kg	SW8240	11/21/96 18:25 PLM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Dibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/21/96 18:25 PLM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Acrylonitrile[107-13-1]	ND	0.31	mg/Kg	SW8240	11/21/96 18:25 PLM
Acrolein[107-D2-8]	ND	6.3	mg/Kg	SW8240	11/21/96 18:25 PLM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM

Continued on next page

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-001 Respectfully
Submitted:

DOW-S-W-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:00
Date Received 11/20/96

Sampled by CLIENT
PD # 78022.00.01

R013097 1334

PAGE 2

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Trichlorofluoromethane[75-69-4]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
SURROGATE RECOVERY - VOLATILE FRACTION					
1,2-Dichloroethane-d4 <SURROGATE>	108	-----	% REC	SW8240	11/21/96 18:25 PLM
Toluene-d8 <SURROGATE>	104	-----	% REC	SW8240	11/21/96 18:25 PLM
Bromofluorobenzene <SURROGATE>	102	-----	% REC	SW8240	11/21/96 18:25 PLM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MOL - Method Detection Limit.

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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-002 Respectfully
Submitted:

DOW-S-S-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:30
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

R013097 1334

H.M. Wright

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
Vinyl chloride[75-01-4]	ND	0.31	mg/Kg	SW8240	11/21/96 19:02 PLM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
1,1-Dichloroethene[75-35-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
1,1-Dichloroethane[75-34-3]	ND	0.31	mg/Kg	SW8240	11/21/96 19:02 PLM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
Chloroform[67-66-3]	ND	0.31	mg/Kg	SW8240	11/21/96 19:02 PLM
1,2-Dichloroethane[107-06-2]	ND	0.31	mg/Kg	SW8240	11/21/96 19:02 PLM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
Carbon tetrachloride[56-23-5]	ND	0.31	mg/Kg	SW8240	11/21/96 19:02 PLM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.31	mg/Kg	SW8240	11/21/96 19:02 PLM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.31	mg/Kg	SW8240	11/21/96 19:02 PLM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
Dibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/21/96 19:02 PLM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
Acrylonitrile[107-13-1]	ND	0.31	mg/Kg	SW8240	11/21/96 19:02 PLM
Acrolein[107-02-8]	ND	6.3	mg/Kg	SW8240	11/21/96 19:02 PLM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM

Continued on next page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-002 Respectfully
Submitted:

DOW-S-S-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:30
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

R013097 1334

PAGE 2

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
Trichlorofluoromethane[75-69-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02 PLM
SURROGATE RECOVERY - VOLATILE FRACTION					
1,2-Dichloroethane-d4 <SURROGATE>	104	-----	% REC	SW8240	11/21/96 19:02 PLM
Toluene-d8 <SURROGATE>	104	-----	% REC	SW8240	11/21/96 19:02 PLM
Bromofluorobenzene <SURROGATE>	104	-----	% REC	SW8240	11/21/96 19:02 PLM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
4643 Benson Avenue, Baltimore, MD 21227-1410 — Tel: (410) 247-7400 Fax: (410) 247-7402

4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-003 Respectfully
Submitted:

DOW-S-N-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 15:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

R013197 0923

PRIORITY POLLUTANTS: VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Vinyl chloride[75-01-4]	NO	0.31	mg/Kg	SW8240	11/21/96 19:38 PLM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
1,1-Dichloroethene[75-35-4]	ND	0.31	mg/Kg	SW8240	11/21/96 19:38 PLM
1,1-Dichloroethane[75-34-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Chloroform[67-66-3]	ND	0.31	mg/Kg	SW8240	11/21/96 19:38 PLM
1,2-Dichloroethane[107-06-2]	ND	0.31	mg/Kg	SW8240	11/21/96 19:38 PLM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Carbon tetrachloride[56-23-5]	ND	0.31	mg/Kg	SW8240	11/21/96 19:38 PLM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.31	mg/Kg	SW8240	11/21/96 19:38 PLM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.31	mg/Kg	SW8240	11/21/96 19:38 PLM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Dibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
2-Chloroethyl vinyl ether[110-75-8]	NO	1.3	mg/Kg	SW8240	11/21/96 19:38 PLM
Bromoform[75-25-2]	NO	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Acrylonitrile[107-13-1]	ND	0.31	mg/Kg	SW8240	11/21/96 19:38 PLM
Acrolein[107-02-8]	NO	6.3	mg/Kg	SW8240	11/21/96 19:38 PLM
1,2-Dichlorobenzene[95-50-11]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM

Continued on next page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-003 Respectfully
Submitted:

DOW-S-N-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 15:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

R013197 0923

PAGE 2

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MOL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
1,4-Dichlorobenzene[106-46-7]	NO	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Trichlorofluoromethane[75-69-4]	NO	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM

SURROGATE RECDVERY - VOLATILE FRACTION

1,2-Dichloroethane-d4 <SURRGATE>	104	----- % REC	SW8240	11/21/96 19:38 PLM
Toluene-d8 <SURROGATE>	106	----- % REC	SW8240	11/21/96 19:38 PLM
Bromofluorobenzene <SURROGATE>	107	----- % REC	SW8240	11/21/96 19:38 PLM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
4643 Benson Avenue, Baltimore, MD 21227-1410 — Tel: (410) 247-7400 Fax: (410) 247-7402

4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-004 Respectfully
Submitted:

DOW-S-E-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 16:25
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

R013097 1410

H. M. Wright

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Vinyl chloride[75-01-4]	NO	0.31	mg/Kg	SW8240	11/21/96 20:15 PLM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Methylene Chloride[75-09-2]	NO	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
1,1-Dichloroethene[75-35-4]	NO	0.31	mg/Kg	SW8240	11/21/96 20:15 PLM
1,1-Dichloroethane[75-34-3]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Chloroform[67-66-3]	NO	0.31	mg/Kg	SW8240	11/21/96 20:15 PLM
1,2-Dichloroethane[107-06-2]	ND	0.31	mg/Kg	SW8240	11/21/96 20:15 PLM
1,1,1-Trichloroethane[71-55-6]	NO	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Carbon tetrachloride[56-23-5]	ND	0.31	mg/Kg	SW8240	11/21/96 20:15 PLM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.31	mg/Kg	SW8240	11/21/96 20:15 PLM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.31	mg/Kg	SW8240	11/21/96 20:15 PLM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Dibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/21/96 20:15 PLM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Acrylonitrile[107-13-1]	ND	0.31	mg/Kg	SW8240	11/21/96 20:15 PLM
Acrolein[107-02-8]	ND	6.3	mg/Kg	SW8240	11/21/96 20:15 PLM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM

Continued on next page

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-004 Respectfully
Submitted:

DOW-S-E-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 16:25
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

H.N. Wright

R013097 1410

PAGE 2

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Trichlorofluoromethane[75-69-4]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM

SURROGATE RECOVERY - VOLATILE FRACTION

1,2-Dichloroethane-d4 <SURROGATE>	104	----- % REC	SW8240	11/21/96 20:15 PLM
Toluene-d8 <SURROGATE>	104	----- % REC	SW8240	11/21/96 20:15 PLM
Bromofluorobenzene <SURROGATE>	103	----- % REC	SW8240	11/21/96 20:15 PLM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-001 Respectfully
Submitted:

DDW-S-W-BTM GRAB
DDW HANGING RDCK, OHID

Date Sampled 11/20/96 14:00
Date Received 11/20/96

Sampled by CLIENT
PD # 78022.00.01

112296 1028

J.N. Wright

ACID EXTRACTABLES:PRIDRITY PDLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
2-Chlorophenol [95-57-8]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
4-Chloro-3-methylphenol [59-50-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
2,4-Dinitrophenol [51-28-5]	ND	1.7	mg/Kg	SW8270	11/21/96 15:19 JER
4-Nitrophenol [100-02-7]	ND	1.7	mg/Kg	SW8270	11/21/96 15:19 JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/21/96 15:19 JER
Pentachlorophenol [87-86-5]	ND	1.7	mg/Kg	SW8270	11/21/96 15:19 JER
SURRGATE RECDVERY - ACID FRACTION					
2-Fluorophenol <SURROGATE>	67	-----	% REC	SW8270	11/21/96 15:19 JER
Phenol-d6 <SURROGATE>	69	-----	% REC	SW8270	11/21/96 15:19 JER
2,4,6-Tribromophenol <SURROGATE>	96	-----	% REC	SW8270	11/21/96 15:19 JER

ND: Not detected at a concentration greater than the MDL • Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-001 Respectfully
Submitted:

DDW-S-W-BTM GRAB
DOW HANGING ROCK, OHID

Date Sampled 11/20/96 14:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.00.01

R013097 1407

H.M. Wright

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPRT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/21/96 15:19 JER
Bis(2-chloroethyl)ether[111-44-4]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
1,3-Dichlorobenzene[541-73-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
1,4-Dichlorobenzene[106-46-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Bis(2-chloroisopropyl)ether[108-60-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/21/96 15:19 JER
Nitrobenzene[98-95-3]	NO	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Hexachloroethane[67-72-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Isophorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Naphthalene[91-20-3]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Hexachlorocyclopentadiene[77-47-4]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Dimethyl phthalate[131-11-3]	NO	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Acenaphthylene[208-96-8]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Acenaphthene[83-32-9]	NO	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
2,6-Dinitrotoluene[606-20-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Fluorene[86-73-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
1,2-Diphenylhydrazine[122-66-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
N-Nitrosodiphenylamine[86-30-6]	ND	0.67	mg/Kg	SW8270	11/21/96 15:19 JER
Hexachlorobenzene[118-74-1]	ND	0.28	mg/Kg	SW8270	11/21/96 15:19 JER
4-Bromophenyl phenyl ether[101-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Anthracene[120-12-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER

Continued on next page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-001 Respectfully
Submitted:

DOW-S-W-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:00
Date Received 11/20/96

Sampled by CLIENT
PO # 7B022.00.01

R013097 1407

PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Di-n-butyl phthalate[84-74-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Fluoranthene[206-44-0]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Pyrene[129-00-0]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Benzidine[92-87-5]	ND	1.7	mg/Kg	SW8270	11/21/96 15:19 JER
Butyl benzyl phthalate[85-68-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Bis(2-ethylhexyl)phthalate[117-81-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Chrysene[218-01-9]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Benzo(a)anthracene[56-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
3,3'-Dichlorobenzidine[91-94-1]	ND	0.99	mg/Kg	SW8270	11/21/96 15:19 JER
Di-n-octylphthalate[117-84-0]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Benzo(b)fluoranthene[205-99-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Benzo(k)fluoranthene[207-08-9]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Benzo(a)pyrene[50-32-8]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Indeno(1,2,3-cd)pyrene[193-39-5]	ND	0.61	mg/Kg	SW8270	11/21/96 15:19 JER
Dibenzo(a,h)anthracene[53-70-3]	ND	0.67	mg/Kg	SW8270	11/21/96 15:19 JER
Benzo(ghi)perylene[191-24-2]	ND	0.67	mg/Kg	SW8270	11/21/96 15:19 JER
SURRGATE RECDVERY - BASE/NEUT FRACTION					
Nitrobenzene-d5<SURROGATE>	64	-----	% REC	SW8270	11/21/96 15:19 JER
2-Fluorobiphenyl<SURROGATE>	76	-----	% REC	SW8270	11/21/96 15:19 JER
o-Terphenyl<SURRGATE>	80	-----	% REC	SW8270	11/21/96 15:19 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-002 Respectfully
Submitted:

DOW-S-S-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:30
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

112296 1028

H. N. Wright

ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2-Chlorophenol [95-57-8]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
4-Chloro-3-methylphenol [59-50-7]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2,4-Dinitrophenol [51-28-5]	ND	1.7	mg/Kg	SW8270	11/21/96 16:09 JER
4-Nitrophenol [100-02-7]	ND	1.7	mg/Kg	SW8270	11/21/96 16:09 JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/21/96 16:09 JER
Pentachlorophenol [87-86-5]	ND	1.7	mg/Kg	SW8270	11/21/96 16:09 JER
SURROGATE RECOVERY - ACID FRACTION					
2-Fluorophenol <SURROGATE>	72	-----	% REC	SW8270	11/21/96 16:09 JER
Phenol-d6 <SURROGATE>	63	-----	% REC	SW8270	11/21/96 16:09 JER
2,4,6-Tribromophenol <SURROGATE>	100	-----	% REC	SW8270	11/21/96 16:09 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
4643 Benson Avenue, Baltimore, MD 21227-1410 — Tel: (410) 247-7400 Fax: (410) 247-7402
4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-002 Respectfully
Submitted:

DOW-S-S-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:30
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

R013097 1407

H.N. Wright

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/21/96 16:09 JER
Bis(2-chloroethyl)ether[111-44-4]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
1,3-Dichlorobenzene[541-73-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
1,4-Dichlorobenzene[106-46-7]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Bis(2-chloroisopropyl)ether[108-60-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/21/96 16:09 JER
Nitrobenzene[98-95-3]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Hexachloroethane[67-72-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Isophorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Naphthalene[91-20-3]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Hexachlorocyclopentadiene[77-47-4]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Dimethyl phthalate[131-11-3]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Acenaphthylene[208-96-8]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Acenaphthene[83-32-9]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2,6-Dinitrotoluene[606-20-2]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Fluorene[86-73-7]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
1,2-Diphenylhydrazine[122-66-7]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
N-Nitrosodiphenylamine[86-30-6]	ND	0.67	mg/Kg	SW8270	11/21/96 16:09 JER
Hexachlorobenzene[118-74-1]	ND	0.28	mg/Kg	SW8270	11/21/96 16:09 JER
4-Bromophenyl phenyl ether[101-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Anthracene[120-12-7]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER

Continued on next page

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-002 Respectfully
Submitted:

DOW-S-S-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:3D
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

R013097 1407

PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE DN AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Di-n-butyl phthalate[84-74-2]	ND	0.33	mg/Kg	SWB270	11/21/96 16:09 JER
Fluoranthene[206-44-0]	ND	0.33	mg/Kg	SWB270	11/21/96 16:09 JER
Pyrene[129-00-0]	ND	0.33	mg/Kg	SWB270	11/21/96 16:09 JER
Benzidine[92-87-5]	ND	1.7	mg/Kg	SWB270	11/21/96 16:09 JER
Butyl benzyl phthalate[85-68-7]	ND	0.33	mg/Kg	SWB270	11/21/96 16:09 JER
Bis(2-ethylhexyl)phthalate[117-81-7]	ND	0.33	mg/Kg	SWB270	11/21/96 16:09 JER
Chrysene[218-01-9]	ND	0.33	mg/Kg	SWB270	11/21/96 16:09 JER
Benzo(a)anthracene[56-55-3]	ND	0.33	mg/Kg	SWB270	11/21/96 16:09 JER
3,3'-Dichlorobenzidine[91-94-1]	ND	0.99	mg/Kg	SWB270	11/21/96 16:09 JER
Di-n-octylphthalate[117-84-0]	ND	0.33	mg/Kg	SWB270	11/21/96 16:09 JER
Benzo(b)fluoranthene[205-99-2]	ND	0.33	mg/Kg	SWB270	11/21/96 16:09 JER
Benzo(k)fluoranthene[207-08-9]	ND	0.33	mg/Kg	SWB270	11/21/96 16:09 JER
Benzo(a)pyrene[50-32-8]	ND	0.33	mg/Kg	SWB270	11/21/96 16:09 JER
Indeno(1,2,3-cd)pyrene[193-39-5]	NO	0.61	mg/Kg	SWB270	11/21/96 16:09 JER
Dibenzo(a,h)anthracene[53-70-3]	ND	0.67	mg/Kg	SWB270	11/21/96 16:09 JER
Benzo(ghi)perylene[191-24-2]	ND	0.67	mg/Kg	SWB270	11/21/96 16:09 JER
SURROGATE RECDVERY - BASE/NEUT FRACTION					
Nitrobenzene-d5<SURROGATE>	67	-----	% REC	SWB270	11/21/96 16:09 JER
2-Fluorobiphenyl<SURRGATE>	73	-----	% REC	SWB270	11/21/96 16:09 JER
o-Terphenyl<SURROGATE>	84	-----	% REC	SWB270	11/21/96 16:09 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-003 Respectfully
Submitted:

DOW-S-N-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 15:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

112296 1028

H.N. Wright

ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2-Chlorophenol [95-57-8]	NO	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
4-Chloro-3-methylphenol [59-50-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2,4-Dinitrophenol [51-28-5]	ND	1.7	mg/Kg	SW8270	11/21/96 17:00 JER
4-Nitrophenol [100-02-7]	ND	1.7	mg/Kg	SW8270	11/21/96 17:00 JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/21/96 17:00 JER
Pentachlorophenol [87-86-5]	ND	1.7	mg/Kg	SW8270	11/21/96 17:00 JER
SURROGATE RECOVERY - ACID FRACTION					
2-Fluorophenol <SURROGATE>	67	-----	% REC	SW8270	11/21/96 17:00 JER
Phenol-d6 <SURRGATE>	63	-----	% REC	SW8270	11/21/96 17:00 JER
2,4,6-Tribromophenol <SURROGATE>	88	-----	% REC	SW8270	11/21/96 17:00 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-003 Respectfully
Submitted:

DOW-S-N-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 15:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

H.M. Wright
RD13097 1408

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/21/96 17:00 JER
Bis(2-chloroethyl)ether[111-44-4]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
1,3-Dichlorobenzene[541-73-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
1,4-Dichlorobenzene[106-46-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Bis(2-chloroisopropyl)ether[108-6D-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/21/96 17:00 JER
Nitrobenzene[98-95-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Hexachloroethane[67-72-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Isophorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Naphthalene[91-20-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Hexachlorocyclopentadiene[77-47-4]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Dimethyl phthalate[131-11-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Acenaphthylene[208-96-8]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Acenaphthene[83-32-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2,6-Dinitrotoluene[606-2D-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Fluorene[86-73-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
1,2-Diphenylhydrazine[122-66-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
N-Nitrosodiphenylamine[86-30-6]	ND	0.67	mg/Kg	SW8270	11/21/96 17:00 JER
Hexachlorobenzene[118-74-1]	ND	0.28	mg/Kg	SW8270	11/21/96 17:00 JER
4-Bromophenyl phenyl ether[101-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Anthracene[120-12-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER

Continued on next page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-003 Respectfully
Submitted:

DOW-S-N-BTM GRAB
DOW HANGING RDCK, DHID

Date Sampled 11/20/96 15:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

H.N. Wright

R013097 1408

PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Di-n-butyl phthalate[84-74-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Fluoranthene[206-44-0]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Pyrene[129-00-0]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Benzidine[92-87-5]	ND	1.7	mg/Kg	SW8270	11/21/96 17:00 JER
Butyl benzyl phthalate[85-68-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Bis(2-ethylhexyl)phthalate[117-81-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Chrysene[218-01-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Benzo(a)anthracene[56-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
3,3'-Dichlorobenzidine[91-94-1]	ND	0.99	mg/Kg	SW8270	11/21/96 17:00 JER
Di-n-octylphthalate[117-84-0]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Benzo(b)fluoranthene[205-99-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Benzo(k)fluoranthene[207-08-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Benzo(a)pyrene[50-32-8]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Indeno(1,2,3-cd)pyrene[193-39-5]	ND	0.61	mg/Kg	SW8270	11/21/96 17:00 JER
Dibenzo(a,h)anthracene[53-70-3]	ND	0.67	mg/Kg	SW8270	11/21/96 17:00 JER
Benzo(ghi)perylene[191-24-2]	ND	0.67	mg/Kg	SW8270	11/21/96 17:00 JER
SURROGATE RECOVERY - BASE/NEUTRAL FRACTION					
Nitrobenzene-d5<SURROGATE>	67	-----	% REC	SW8270	11/21/96 17:00 JER
2-Fluorobiphenyl<SURROGATE>	75	-----	% REC	SW8270	11/21/96 17:00 JER
o-Terphenyl<SURROGATE>	80	-----	% REC	SW8270	11/21/96 17:00 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-004 Respectfully
Submitted:

DOW-S-E-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 16:25
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

112296 1028

H.N. Wright

ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2-Chlorophenol [95-57-8]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
4-Chloro-3-methylphenol [59-50-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2,4-Dinitrophenol [51-28-5]	ND	1.7	mg/Kg	SW8270	11/21/96 17:50 JER
4-Nitrophenol [100-02-7]	ND	1.7	mg/Kg	SW8270	11/21/96 17:50 JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/21/96 17:50 JER
Pentachlorophenol [87-86-5]	ND	1.7	mg/Kg	SW8270	11/21/96 17:50 JER
SURROGATE RECOVERY - ACID FRACTION					
2-Fluorophenol <SURROGATE>	68	-----	% REC	SW8270	11/21/96 17:50 JER
Phenol-d6 <SURROGATE>	66	-----	% REC	SW8270	11/21/96 17:50 JER
2,4,6-Tribromophenol <SURROGATE>	81	-----	% REC	SW8270	11/21/96 17:50 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614

ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-004 Respectfully
Submitted:

DOW-S-E-BTM GRAB
DDW HANGING ROCK, DHID

Date Sampled 11/20/96 16:25
Date Received 11/20/96

Sampled by CLIENT
PD # 78022.0001

R013097 1408

H.N. Wright

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/21/96 17:50 JER
Bis(2-chloroethyl)ether[111-44-4]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
1,3-Dichlorobenzene[541-73-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
1,4-Dichlorobenzene[106-46-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Bis(2-chloroisopropyl)ether[108-60-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/21/96 17:50 JER
Nitrobenzene[98-95-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Hexachloroethane[67-72-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Isophorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Naphthalene[91-20-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Hexachlorocyclopentadiene[77-47-4]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Dimethyl phthalate[131-11-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Acenaphthylene[208-96-8]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Acenaphthene[83-32-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2,6-Dinitrotoluene[606-20-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Fluorene[86-73-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
1,2-Diphenylhydrazine[122-66-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
N-Nitrosodiphenylamine[86-30-6]	ND	0.67	mg/Kg	SW8270	11/21/96 17:50 JER
Hexachlorobenzene[118-74-1]	ND	0.28	mg/Kg	SW8270	11/21/96 17:50 JER
4-Bromophenyl phenyl ether[101-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Anthracene[120-12-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER

Continued on next page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-004 Respectfully
Submitted:

DOW-S-E-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 16:25
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

H.N. Wright

R013097 1408

PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

REVISED REPORT

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Di-n-butyl phthalate[84-74-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Fluoranthene[206-44-0]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Pyrene[129-00-0]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Benzidine[92-87-5]	ND	1.7	mg/Kg	SW8270	11/21/96 17:50 JER
Butyl benzyl phthalate[85-68-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Bis(2-ethylhexyl)phthalate[117-81-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Chrysene[218-01-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Benzo(a)anthracene[56-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
3,3'-Dichlorobenzidine[91-94-1]	ND	0.99	mg/Kg	SW8270	11/21/96 17:50 JER
Di-n-octylphthalate[117-84-0]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Benzo(b)fluoranthene[205-99-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Benzo(k)fluoranthene[207-08-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Benzo(a)pyrene[50-32-8]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Indeno(1,2,3-cd)pyrene[193-39-5]	ND	0.61	mg/Kg	SW8270	11/21/96 17:50 JER
Dibenzo(a,h)anthracene[53-70-3]	ND	0.67	mg/Kg	SW8270	11/21/96 17:50 JER
Benzo(ghi)perylene[191-24-2]	ND	0.67	mg/Kg	SW8270	11/21/96 17:50 JER
SURROGATE RECOVERY - BASE/NEUT FRACTION					
Nitrobenzene-d5<SURRGATE>	67	-----	% REC	SW8270	11/21/96 17:50 JER
2-Fluorobiphenyl<SURROGATE>	76	-----	% REC	SW8270	11/21/96 17:50 JER
o-Terphenyl<SURROGATE>	76	-----	% REC	SW8270	11/21/96 17:50 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
4643 Benson Avenue, Baltimore, MD 21227-1410 — Tel: (410) 247-7400 Fax: (410) 247-7402

4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CHAIN OF CUSTODY RECORD
CT&E Environmental Services Inc.
Laboratory Division

Locations Nationally
 • Alaska • Michigan
 • California • New Jersey
 • Florida • Ohio
 • Illinois • Pennsylvania
 • Maryland • West Virginia
 • Michigan

(1) CLIENT: ERM, Inc.		CONTACT: P. Gebhard		PHONE NO: (304) 757-8017		PROJECT: Dow		SITE: Hanging Rock, W. Va.		CT&E Reference: 11-509-14		PAGE 1 OF 1	
REPORTS TO: P. Gebhard		FAX NO: (304) 757-8190		INVOICE TO: P. Gebhard		PO. NUMBER: 78022.00.01							
(2) LAB NO.		SAMPLE IDENTIFICATION		DATE		TIME		MATRIX		REMARKS			
Dow - S-W-Btm		11/20/96 1400		Soil		2		G		X X			
Dow - S-S-Btm		11/20/96 1430		Soil		2		G		X X			
Dow - S-N-Btm		11/20/96 1500		Soil		2		G		X X			
Dow - S-E-Btm		11/20/96 1625		Soil		2		G		X X			
(3) Collected / Relinquished By: (1)		Date 11/20/96		Time 1930		Received By:				(4) Shipping Carrier: UPS		Samples Received Cold? (Circle) YES NO	
P. Gebhard													
Relinquished By: (2)		Data		Time		Received By:				Shipping Ticket No:		Temperature °C: 50	
Relinquished By: (3)		Date		Time		Received By:				Data Deliverables Required		Chain of Custody Seal: (Circle)	
										Level I Level II Level III		INTACT BROKEN ABSENT	
Relinquished By: (4)		Date 11/20		Time 1930		Received For Laboratory By: <u>Mary Stewart</u>						Requested Turnaround Time and Special Instructions: <u>Result</u>	

APPENDIX B

Soil and Sludge Analytical Results (TCLP)

Centre Analytical
Laboratories, Inc.

3048 Research Drive, State College PA 16801 814-231-8032 FAX 814-231-1253

Page 1

ENVIROCLEAN
355 EAST CAMPUS VIEW, Ste. 250
COLUMBUS, OH 43235

Date Received: 07-NOV-96
Date Reported: 15-NOV-96

Account Number: 1226

Invoice Number: 12449

Contact: MYRA HART

Date Collected: 06-NOV-96

Client ID: DOW SLUDGE 1

Lab ID: L13110-1

PARAMETER	UNITS	RESULT	LIMIT OF QUANTIFICATION	TEST METHOD	TEST DATE	ANALYST
MERCURY-TCLP LEACHATE	mg/L	< .0002	.0002	EPA 7470	11-NOV-96	JH
SILVER-TCLP LEACHATE	mg/L	< .05	.05	EPA 200.7	11-NOV-96	JH
ARSENIC-TCLP LEACHATE	mg/L	< .05	.05	EPA 200.7	11-NOV-96	JH
BARIUM-TCLP LEACHATE	mg/L	2.63	.01	EPA 200.7	11-NOV-96	JH
CADMIUM-TCLP LEACHATE	mg/L	< .01	.01	EPA 200.7	11-NOV-96	JH
CHROMIUM-TCLP LEACHATE	mg/L	< .01	.01	EPA 200.7	11-NOV-96	JH
COPPER-TCLP LEACHATE	mg/L	< .01	.01	EPA 200.7	11-NOV-96	JH
LEAD-TCLP LEACHATE	mg/L	< .03	.03	EPA 200.7	11-NOV-96	JH
SELENIUM-TCLP LEACHATE	mg/L	< .05	.05	EPA 200.7	11-NOV-96	JH
VOLATILES: TCLP LIST						
VINYL CHLORIDE	ug/L	< 10	10	EPA 8240	15-NOV-96	GS
1,1-DICHLOROETHENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
2-BUTANONE	ug/L	< 10	10	EPA 8240	15-NOV-96	GS
CHLOROFORM	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
CARBON TETRACHLORIDE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
BNEZENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
1,2-DICHLOROETHANE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS

Submitted by
Centre Analytical Labs, Inc.
Reviewed and Approved by:

Kevin J. Lloyd
Laboratory Supervisor





Centre Analytical Laboratories, Inc.

Page 2

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Invoice Number: 12449

Contact: MYRA HART

Date Collected: 06-NOV-96

Client ID: DOW SLUDGE 1

Lab ID: L13110-1

PARAMETER	UNITS	RESULT	LIMIT OF QUANTIFICATION	TEST METHOD	TEST DATE	ANALYST
TRICHLOROETHENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
TETRACHLOROETHENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
OBENZENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
1,4-DICHLOROBENZENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
SEMI-VOLATILE: TCLP LIST						
2-METHYLPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
3-METHYLPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
4-METHYLPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
PENTACHLOROPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
2,4,5-TRICHLOROPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
2,4,6-TRICHLOROPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
HEXACHLOROETHANE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
HEXACHLOROBUTADIENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
NITROBENZENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
HEXAChLOROBENZENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
2,4-DINITROTOLUENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
PYRIDINE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS

Submitted by
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Reviewed and Approved by:

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Laboratory Supervisor




**Centre Analytical
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Lab ID: L13110-1

PARAMETER	UNITS	RESULT	LIMIT OF QUANTIFICATION	TEST METHOD	TEST DATE	ANALYST
PESTICIDES : TCLP LIST						
GAMMA-BHC	ug/L	< .133	.133	EPA 8080	15-NOV-96	CS
TCHLOR	ug/L	< .133	.133	EPA 8080	15-NOV-96	CS
AChLOR EPOXIDE	ug/L	< .133	.133	EPA 8080	15-NOV-96	CS
ENDRIN	ug/L	< .667	.667	EPA 8080	15-NOV-96	CS
METHOXYCHLOR	ug/L	< 6.67	6.67	EPA 8080	15-NOV-96	CS
TOXAPHENE	ug/L	< 6.67	6.67	EPA 8080	15-NOV-96	CS
HERBICIDES : TCLP LIST						
2, 4-D	ug/L	< .5	.5	EPA 8150	15-NOV-96	CS
SILVEK	ug/L	< .167	.167	EPA 8150	15-NOV-96	CS
CYANIDE-REACTIVE	mg/Kg (dry)	< .193	.193	EPA SW 846	12-NOV-96	JY
CORROSIVITY	pH UNITS	7.62	0	EPA 9040	07-NOV-96	GHD
FLASH POINT	Degrees F	> 140	140	EPA 1010/1020	15-NOV-96	SUB
FREE LIQUID	-	NO	0	EPA 9095	07-NOV-96	GHD
PERCENT SOLIDS	%	41.15	.01	SM 2540A	07-NOV-96	GHD
pH	pH UNITS	7.62	0	EPA 9040	07-NOV-96	GHD
REACTIVE SULFIDE	mg/Kg (dry)	32.9	6.33	SW 846 7.3.4	08-NOV-96	GAF

 Submitted by
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Date Reported: 15-NOV-96

Account Number: 1226

Invoice Number: 12449

Contact: MYRA HART

Date Collected: 06-NOV-96

Client ID: DOW SOIL 1

Lab ID: L13110-2

PARAMETER	UNITS	RESULT	LIMIT OF QUANTIFICATION	TEST METHOD	TEST DATE	ANALYST
MERCURY-TCLP LEACHATE	mg/L	< .0002	.0002	EPA 7470	11-NOV-96	JH
SILVER-TCLP LEACHATE	mg/L	< .05	.05	EPA 200.7	11-NOV-96	JH
ARSENIC-TCLP LEACHATE	mg/L	< .05	.05	EPA 200.7	11-NOV-96	JH
BARIUM-TCLP LEACHATE	mg/L	1.13	.01	EPA 200.7	11-NOV-96	JH
CADMIUM-TCLP LEACHATE	mg/L	< .01	.01	EPA 200.7	11-NOV-96	JH
CHROMIUM-TCLP LEACHATE	mg/L	< .01	.01	EPA 200.7	11-NOV-96	JH
COPPER-TCLP LEACHATE	mg/L	< .01	.01	EPA 200.7	11-NOV-96	JH
LEAD-TCLP LEACHATE	mg/L	< .03	.03	EPA 200.7	11-NOV-96	JH
SELENIUM-TCLP LEACHATE	mg/L	< .05	.05	EPA 200.7	11-NOV-96	JH
VOLATILES: TCLP LIST						
VINYL CHLORIDE	ug/L	< 10	10	EPA 8240	15-NOV-96	GS
1,1-OICHLOROETHENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
2-BUTANONE	ug/L	< 10	10	EPA 8240	15-NOV-96	GS
CHLOROFORM	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
CARBON TETRACHLORIDE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
BNEZENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
1,2-OICHLOROETHANE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS

Submitted by
Centre Analytical Labs, Inc.
Reviewed and Approved by:

Kevin J. Lloyd
Laboratory Supervisor





Centre Analytical Laboratories, Inc.

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Page 2

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Lab ID: L13110-2

PARAMETER	UNITS	RESULT	LIMIT OF QUANTIFICATION	TEST METHOD	TEST DATE	ANALYST
TRICHLOROETHENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
ACHLOROETHENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
ROBENZENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
1,1-DICHLORBENZENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
SEMI-VOLATILE: TCPL LIST						
2-METHYLPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
3-METHYLPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
4-METHYLPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
PENTACHLOROPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
2,4,5-TRICHLOROPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
2,4,6-TRICHLOROPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
HEXACHLOROETHANE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
HEXACHLOROBUTADIENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
NITROBENZENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
HEXAChLOROBENZENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
2,4-DINITROTOLUENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
PYRIDINE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS

Submitted by
Centre Analytical Labs, Inc.
Reviewed and Approved by:

Kevin J. Lloyd
Laboratory Supervisor





Centre Analytical Laboratories, Inc.

Page 3

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Date Collected: 06-NOV-96

Client ID: DOW SOIL 1

Lab ID: L13110-2

PARAMETER	UNITS	RESULT	LIMIT OF QUANTIFICATION	TEST METHOD	TEST DATE	ANALYST
PESTICIDES: TCLP LIST						
GAMMA-BHC	ug/L	< .133	.133	EPA 8080	15-NOV-96	CS
V-CHLOR	ug/L	< .133	.133	EPA 8080	15-NOV-96	CS
CHLOR EPOXIDE	ug/L	< .133	.133	EPA 8080	15-NOV-96	CS
ENDRIN	ug/L	< .667	.667	EPA 8080	15-NOV-96	CS
METHOXYCHLOR	ug/L	< 6.67	6.67	EPA 8080	15-NOV-96	CS
TOXAPHENE	ug/L	< 6.67	6.67	EPA 8080	15-NOV-96	CS
HERBICIDES: TCLP LIST						
2,4-D	ug/L	< .5	.5	EPA 8150	15-NOV-96	CS
SILVEX	ug/L	< .167	.167	EPA 8150	15-NOV-96	CS
CYANIDE-REACTIVE	mg/Kg (dry)	< .0967	.0967	EPA SW 846	12-NOV-96	JY
CORROSIVITY	PH UNITS	8.42	0	EPA 9040	07-NOV-96	GHD
FLASH POINT	Degrees F	> 140	140	EPA 1010/1020	15-NOV-96	SUB
FREE LIQUID	-	NO	0	EPA 9095	07-NOV-96	GHD
PERCENT SOLIDS	%	85.36	.01	SM 2540A	07-NOV-96	GHD
PH	PH UNITS	8.42	0	EPA 9040	07-NOV-96	GHD
REACTIVE SULFIDE	mg/Kg (dry)	18	3.39	SW 846 7.3.4	08-NOV-96	GAF

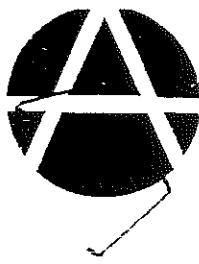
Submitted by
Centre Analytical Labs, Inc.
Reviewed and Approved by:

Kevin J. Lloyd
Laboratory Supervisor



APPENDIX C

Sludge and Soil Disposal Manifests



Green Valley Environmental Corp.

1500 North Big Run Road
Ashland, KY 41102
Telephone (606) 928-0239
Fax (606) 928-1239

Code # 6680

(1)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical

Street Address: 16 Us 52

City: Weston

County: Lawrence

State: Ohio

Contact Name: Joe Murphy

Phone No: 644-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-21-96

Quantity Shipped: 44,900 lb BWL 505

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald A. Murphy Date: 11/21/96

Transporter (No. 1): BWL Tracking Co

Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley

Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Paul McDavid Date: 11/21/96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Soiled Soils

Date Received: 11/21/96 Quantity Received: 22.48

Facility Signature: _____ Date: 11/21/96



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Ashland, KY 41102
Telephone (606) 928-0239
Fax (606) 928-1239

Code # 6680

(2)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Paw Chemical Street Address: 10 US 52

City: Ashland County: Lawrence State: Ohio

Contact Name: Don Murphy Phone No: 604-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-22-96 Quantity Shipped: 49,540 BWC 305

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11-22-96

Transporter (No. 1): BWC Trucking Co Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 604-521-8487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Paul McDowell Date: 11-22-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/22/96 Quantity Received: 24.56

Facility Signature: J. D. Kelly Date: 11/22/96



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(21)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ohio US 52
City: Troy County: Lawrence State: Ohio
Contact Name: D. Murphy Phone No: 644-533-4087
Description of Waste: Sludge & Soils

Date Shipped: 11-22-96 Quantity Shipped: 49,780 BWC 510

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11-22-96

Transporter (No. 1): RBC Recycling Co. Street Address: Wheelersburg Ohio
Contact Name: Randy Kelley Phone No: 644-524-5187

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Randy Kelley Date: 11-22-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/22/96 Quantity Received: 24.80

Facility Signature: Randy Kelley Date: 11/22/96



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Code # 16680

(32)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Pow Chemical Street Address: Ohio US 52
City: Ashland County: Lawrence State: Ohio
Contact Name: Don Murphy Phone No: 604-533-2087
Description of Waste: Sludge & Soil

Date Shipped: 11-22-96 Quantity Shipped: 51,780 BWC G-5

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11-22-96

Transporter (No. 1): BNC Trucking Co Street Address: Wheelersburg Ohio
Contact Name: Randy Kelley Phone No: 604-524-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Steve Harrell Date: 11-22-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

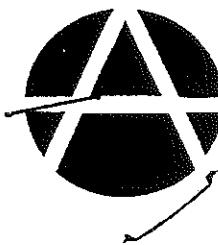
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: _____

Date Received: 11-22-96 Quantity Received: 25.71

Facility Signature: Steve Harrell Date: 11-22-96



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Code # 6680

(27)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ohio US 52

City: Portage County: Lawrence State: Ohio

Contact Name: Donald H Murphy Phone No: 64-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-22-96 Quantity Shipped: 49.740 BWC-G-6

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H Murphy Date: 11-22-96

Transporter (No. 1): BWC Trucking Co Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 614-521-5187

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Randy Kelley Date: 11-22-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge + Soils

Date Received: 11/22/96 Quantity Received: 24.69

Facility Signature: Randy Kelley Date: 11/22/96



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Code # 6680

(31)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator):

Street Address:

Ohio US 52

City: Winton

County: Lawrence

State: Ohio

Contact Name: Don Murphy

Phone No: 614-533-2087

Description of Waste: Sludge & Soils

BWC-G-2

Date Shipped: 11-22-96

Quantity Shipped: 49,540

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy

Date: 11-22-96

Transporter (No. 1):

Street Address:

Wheelerburg Ohio

Contact Name: Randy Kelley

Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Randy Kelley

Date: 11/22/96

Other Handlers (Transfer Facility):

Street Address:

Contact Name: _____

Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____

Quantity Shipped: _____

Facility Signature: _____

Date: _____

Transporter (No. 2):

Street Address:

Contact Name: _____

Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____

Date: _____

Disposal Facility: Green Valley Environmental

Street Address: Ashland, KY

Contact Name: Randy Kelley

Phone No: (606) 928-0239

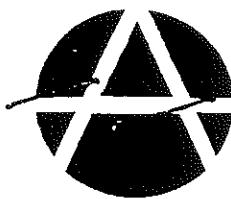
Description of Waste: Sludge & Soils

Date Received: 11-22-96

Quantity Received: 24.61

Facility Signature: Randy Kelley

Date: 11/22/96



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Code # 6680

25

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ohio US 52

City: Weston County: Lawrence State: Ohio

Contact Name: Donald Murphy Phone No: 64-533-4087

Description of Waste: Sludge: Soils

Date Shipped: 11-22-96 Quantity Shipped: 46,380

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11-22-96

Transporter (No. 1): Bulk Tank King Co Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 64-524-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Nant Church Date: 11-22-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

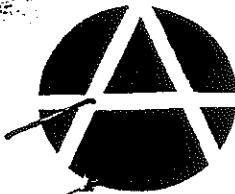
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: 986-31

Date Received: _____ Quantity Received: 2306

Facility Signature: _____ Date: 11-22-96



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Code # 1680

33

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: 100 W 52
City: Poole County: Lawrence State: Ohio
Contact Name: Tan Murphy Phone No: 644-533-4087
Description of Waste: Sludge & Soils

Date Shipped: 11-22-96 Quantity Shipped: 43,540 BAC-509

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Ronald H. Murphy Date: 11-22-96

Transporter (No. 1): Buck Trucking Co Street Address: Wheelersburg Ohio
Contact Name: Randy Kelley Phone No: 644-524-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: John Thomas Date: 11-22-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

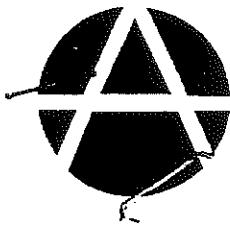
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/22/96 Quantity Received: 2161

Facility Signature: J. Murphy Date: 11/22/96



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Code # 6680

(31)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator):

City:

Contact Name:

Description of Waste:

Street Address:

County:

State:

Phone No:

Date Shipped:

Quantity Shipped:

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature:

Date:

Transporter (No. 1):

Street Address:

Contact Name:

Phone No:

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature:

Date:

Other Handlers (Transfer Facility):

Street Address:

Contact Name:

Phone No:

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received:

Quantity Shipped:

Facility Signature:

Date:

Transporter (No. 2):

Street Address:

Contact Name:

Phone No:

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature:

Date:

Disposal Facility: Green Valley Environmental

Street Address: Ashland, KY

Contact Name: Randy Kelley

Phone No: (606) 928-0239

Description of Waste:

Date Received:

Quantity Received:

24.64

Facility Signature:

Date:

11/22/96



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Code # 6680

(30)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator):

Dow Chemical

Street Address:

Ohio US 52

City:

Poole

County:

Lawrence

State:

Ohio

Contact Name:

Don Murphy

Phone No:

614-533-2087

BWC - 504

Description of Waste: Sludge & Soils

Date Shipped: 11-22-96

Quantity Shipped: 48,340

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature:

Donald H. Murphy

Date: 11-22-96

Transporter (No. 1):

BWC Packing Co

Street Address:

Wheelersburg Ohio

Contact Name:

Randy Kelley

Phone No:

614-524-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature:

BRYANT BULGATER

Date: 11-22-96

Other Handlers (Transfer Facility):

Street Address:

Contact Name:

Phone No:

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received:

Quantity Shipped:

Facility Signature:

Date:

Transporter (No. 2):

Street Address:

Contact Name:

Phone No:

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature:

Date:

Disposal Facility: Green Valley Environmental

Street Address: Ashland, KY

Contact Name: Randy Kelley

Phone No: (606) 928-0239

Description of Waste:

Sludge & Soils

Date Received: 11/22/96

Quantity Received:

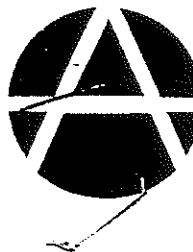
23.99

Facility Signature:

Jeanie Deasy

Date: 11/22/96

AEI - 03



Green Valley Environmental Corp.

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Ashland, KY 41102
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Fax (606) 928-1239

Code # 6680

(20)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ohio US 52

City: Ashland County: Lawrence State: Ohio

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-22-96 Quantity Shipped: 50,520 BWC-5c4

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11-22-96

Transporter (No. 1): BWC Tracking Co. Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: BRYANT BUSTERTER Date: 11-22-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/23/96 Quantity Received: 25,14

Facility Signature: S. D. Murphy Date: 11/23/96

**Green Valley Environmental Corp.**

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Code # 6680

(28)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ob us 52

City: Lebanon County: Lawrence State: Ohio

Contact Name: Dee Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soile

Date Shipped: 11-22-96 Quantity Shipped: 52,580 BWC-G-16

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11-22-96

Transporter (No. 1): BIG Tracking Co Street Address: Wheelersburg, Ohio

Contact Name: Randy Kelley Phone No: 614-521-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Tim Bunge Date: 11-22-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soile

Date Received: 11/22/96 Quantity Received: 26.0

Facility Signature: J. P. Bunge Date: 11/22/96



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Code # 6680

(19)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: 100 US 52
City: Leesburg County: LAWRENCE State: Ohio
Contact Name: Don Murphy Phone No: 614-533-2087
Description of Waste: Sludge & Soils

Date Shipped: 11-21-96 Quantity Shipped: 48,440 BWC-G-16

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald N. Murphy Date: 11-21-96

Transporter (No. 1): BWC Tracking Co Street Address: Wheelersburg Ohio
Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Tim Burge Date: 11/21/96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/21/96 Quantity Received: 24.09

Facility Signature: Jeanne Date: 11/22/96



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Code # Lele 80

(29)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator):

Dow Chemical

Street Address:

Ohio 44652

City:

Ashland

County:

LAWRENCE

State:

Ohio

Contact Name:

Dan Murphy

Phone No:

(606)-533-4087

Description of Waste:

Sludge & Soils

Date Shipped:

11-22-96

Quantity Shipped:

49380

SWC - 6-10

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature:

Donald N. Murphy

Date: 11-22-96

Transporter (No. 1):

RWB Trucking Co

Street Address:

Wheelersburg Ohio

Contact Name:

Randy Kelley

Phone No:

(606)-524-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature:

Mike Richardson

Date: 11-22-96

Other Handlers (Transfer Facility):

Street Address:

Contact Name:

Phone No:

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received:

Quantity Shipped:

Facility Signature:

Date:

Transporter (No. 2):

Street Address:

Contact Name:

Phone No:

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature:

Date:

Disposal Facility: Green Valley Environmental

Street Address: Ashland, KY

Contact Name: Randy Kelley

Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/22/96

Quantity Received: 24.73

Facility Signature:

Date: 11/22/96



Green Valley Environmental Corp.

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Ashland, KY 41102
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Fax (606) 928-1239

Code # 6680

(18)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ob U.S. 52
City: Ashland County: Lawrence State: Ohio
Contact Name: D. Murphy Phone No: 64-533-087
Description of Waste: Sludge & Soils

Date Shipped: 11-21-96 Quantity Shipped: 40,860 BWC G-1C

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Ronald W. Murphy Date: 11-21-96

Transporter (No. 1): BWT Trucking Co. Street Address: Wheelersburg Ohio
Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Nicole Rector Date: 11-21-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

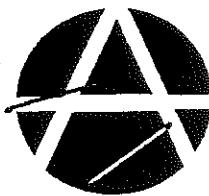
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: _____

Date Received: _____ Quantity Received: 2240

Facility Signature: 500 Int'l. Date: 11-21-96



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Fax (606) 928-1239

Code # 6680

(13)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ohio 118 S2
City: Leeds County: Lawrence State: Ohio
Contact Name: Don Murphy Phone No: 644-533-4087
Description of Waste: Sludge & Soils

Date Shipped: 11-21-96 Quantity Shipped: 51,760 BWC G-11

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald W. Murphy Date: _____

Transporter (No. 1): DBWC Tracking Co. Street Address: Wheelersburg Ohio
Contact Name: Jeffrey C. Gray Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Jeff Gray Date: 11-21-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/21/96 Quantity Received: 25,76

Facility Signature: Scott Dang Date: 11/21/96



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Ashland, KY 41102
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Code # 6680

(12)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ohio 45552

City: Leeds County: Harrison State: Ohio

Contact Name: D. Murphy Phone No: 614-533-1087

Description of Waste: Sludge & Soils

Date Shipped: 11-21-96 Quantity Shipped: 26,500 BWC-10

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Ronald N. Murphy Date: 11-21-96

Transporter (No. 1): BWC Tracking Co. Street Address: Westerville Ohio

Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Allen Stone Date: 11-21-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/21/96 Quantity Received: 13.10

Facility Signature: J. Dowdy Date: 11-21-96



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Code # 6680

(11)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ohio US 52

City: Ashland County: Lawrence State: Ohio

Contact Name: Dan Murphy Phone No: 644-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-21-96 Quantity Shipped: 52,740

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11-21-96

Transporter (No. 1): DBWJ Trucking Co Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Randy Kelley Date: 11-21-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/21/96 Quantity Received: 26.28

Facility Signature: Randy Kelley Date: 11/21/96



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Code # 6680

(H)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical

Street Address: Block 52

City: Rosie

County: Lawrence

State: Ohio

Contact Name: D. Murphy

Phone No: 64-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-21-96

Quantity Shipped: 48160

BCW G-8

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11-21-96

Transporter (No. 1): BWC Trucking Co

Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley

Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Kelly Glover Date: 11-21-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11-21-96 Quantity Received: 23.94

Facility Signature: John Doe Date: 11-21-96



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Code # 6680

(6)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ohio 15 52

City: Dickson County: Lawrence State: Ohio

Contact Name: Dorothy Murphy Phone No: 641-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-21-96 Quantity Shipped: 50,560

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Dorothy Murphy Date: 11-21-96

Transporter (No. 1): BWD Trucking Co Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Mike Richards Date: 11-21-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/21/96 Quantity Received: 25.23

Facility Signature: Sandy Dugay Date: 11/21/96



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Code # 6680

15

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Troy County: LAWRENCE State: Ohio

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-21-96 Quantity Shipped: 51,820 bcu G-8

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11-21-96

Transporter (No. 1): BWC Trucking Co Inc Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Sherry Howard Date: 11/21/96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

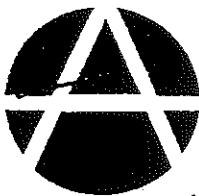
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/21/96 Quantity Received: 25,13

Facility Signature: [Signature] Date: 11/21/96



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Code # 6680

(8)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ob Us 52

City: St. Louis County: LAWRENCE State: Ohio

Contact Name: Dee Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-21-96 Quantity Shipped: 41180 BWC-6-8

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Dee Murphy Date: 11-21-96

Transporter (No. 1): Dow Tracking Co Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Stacy Howard Date: 11-21-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/23/96 Quantity Received: 20.48

Facility Signature: J. St. Louis Date: 11/21/96



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Code # 6680

(16)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: 10 US 52

City: Irondequoit County: Lancaster State: Ohio

Contact Name: Don Murphy Phone No: 644-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-21-96 Quantity Shipped: 48980

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald W. Murphy Date: 11-21-96

Transporter (No. 1): BWC Recycling Co. Street Address: Wheelersburg

Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Jam Ricos Date: 11-21-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: 98507

Date Received: _____ Quantity Received: 24.37

Facility Signature: Bonita Date: 11-21-96



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Code # 6680

(7)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ohio US 52

City: Ashland County: Lawrence State: Ohio

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-21-96 Quantity Shipped: 46,400 BWC G-6

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11-21-96

Transporter (No. 1): BWC Tracking Co Street Address: Wheelingburg Ohio

Contact Name: Randy Kelley Phone No: 800-468-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Sam Ricks Date: 11-21-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

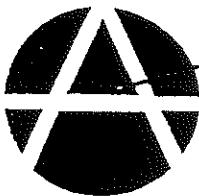
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/21/96 Quantity Received: 23.06

Facility Signature: J. Dowd Date: 11/21/96



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Code # 6680

(17)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical

Street Address: Ohio US 52

City: Porter

County: Harrison

State: Ohio

Contact Name: Dee Murphy

Phone No: 644-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-21-96

Quantity Shipped: 48,600

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11-21-96

Transporter (No. 1): BWC Trucking Co.

Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley

Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Randy Kelley Date: 11-21-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: 98510

Quantity Received: 24.26

Facility Signature: Bonita Date: 11-21-96



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Code # 6680

(9)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ohio US 52

City: Leipsic County: Lawrence State: Ohio

Contact Name: Don Murphy Phone No: 606-533-4087

Description of Waste: Sludge & Soil BWC - 6-2

Date Shipped: 11-21-96 Quantity Shipped: 50,560

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11-21-96

Transporter (No. 1): BWC Tracking Co Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Jerron Palmer Date: 11/21/96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soil

Date Received: 11/21/96 Quantity Received: 24.50

Facility Signature: S. Schloss Date: 11/21/96



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Code # 6680

(5)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: 100 US 52

City: Iranda County: Lawrence State: Ohio

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Sol's

Date Shipped: 11/21/96 Quantity Shipped: 44,180 BWC G-2

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11/21/96

Transporter (No. 1): BWC Tracking Co Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Donald Romeo Date: 11/21/96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

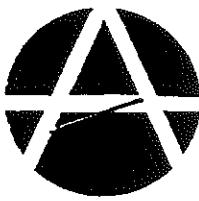
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Sol's

Date Received: 11/21/96 Quantity Received: 77 C3

Facility Signature: Randy Kelley Date: 11/21/96

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Code # 6680

(10)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ob US 52

City: Ashland County: Lawrence State: Ohio

Contact Name: Dan Murphy Phone No: 414-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-21-96 Quantity Shipped: 48,640 BWC 510

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald A. Murphy Date: _____

Transporter (No. 1): BWC Tracking Co Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Marty Murphy Date: 11-21-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/21/96 Quantity Received: 24.72

Facility Signature: J. Scott Daily Date: 11/21/96



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Code # 6680

(3)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ohio US 52

City: Troy County: Lawrence State: Ohio

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11/21/96 Quantity Shipped: 41,540 CTS \$10

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11/21/96

Transporter (No. 1): BWC Trucking Co Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Marty Church Date: 11-21-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/21/96 Quantity Received: 26.70

Facility Signature: John Daily Date: 11/21/96



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Code # 6680

(4)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: 10 US 52

City: Tronto County: Lawrence State: Ohio

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11/21/96 Quantity Shipped: 33,220

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald W. Murphy Date: 11/21/96

Transporter (No. 1): BWC TRUCKING CO Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Jerry W. Thomas Date: 11-21-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 11/21/96 Quantity Received: 16.56

Facility Signature: S. D. Murphy Date: 11/21/96



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Code # 6680

(2)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ohio US 52

City: Tipton County: Harrison State: Ohio

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soil

Date Shipped: 11/21/96 Quantity Shipped: 45,860 BwC #504

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Ronald N. Murphy Date: 11-21-96

Transporter (No. 1): BWC Tracking Co Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 800-668-1292

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: BRYANT BUSTETTER Date: 11-21-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

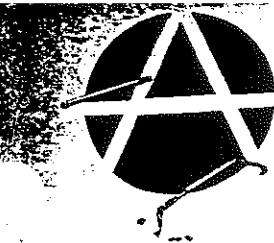
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge - 1 Soiler

Date Received: 11/21/96 Quantity Received: 22.50

Facility Signature: Randy Kelley Date: 11/21/96



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1500 North Big Run Road
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Code # 6680

(63)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Troyer County: Lawrence State: OHIO

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 12-10-96 Quantity Shipped: 50,920 G-8

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-10-96

Transporter (No. 1): BWC Trucking Co. Street Address: WHEELERSBURG, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Stacy Howard Date: 12-10-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

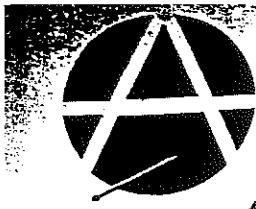
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 12/10/96 Quantity Received: 25.33

Facility Signature: Bob Dugay Date: 12/10/96



Green Valley Environmental Corp.

1500 North Big Run Road
Ashland, KY 41102
Telephone (606) 928-0239
Fax (606) 928-1239

Code # 6680

(leg)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Fulton County: Lawrence State: OHIO

Contact Name: Dou Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soil

Date Shipped: 12-10-96 Quantity Shipped: 50,580 G-10

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H Murphy Date: 12-10-96

Transporter (No. 1): BWC Tracking Co. Street Address: WHEELERSBURG, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Mike Richards Date: 12-10-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soil

Date Received: 12/10/96 Quantity Received: 25.25

Facility Signature: Scibilia Date: 12/10/96



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Code # 6680

(58)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old U.S. 52

City: Troyton County: Lawrence State: OH, 0

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 12-10-96 Quantity Shipped: 48920 6-10

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-10-96

Transporter (No. 1): BWC Trucking Co. Street Address: Wheelersburg, OH, 0

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Mike Rizkawi Date: 12-10-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 12/10/96 Quantity Received: 94.34

Facility Signature: J. D. Dally Date: 12/10/96



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Code # 6680

(56)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Ironman County: LAWRENCE State: Ohio

Contact Name: Dave Murphy Phone No: 614-533-4087

Description of Waste: SLUDGE & SOILS

Date Shipped: 12-10-96 Quantity Shipped: 54,400 G-10

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Dave Murphy Date: 12-10-96

Transporter (No. 1): BWC Trucking Co. Street Address: Wheelersburg, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Mike Richardson Date: 12-10-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 12/10/96 Quantity Received: 27.70

Facility Signature: John D. B. Date: 12/10/96



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1500 North Big Run Road
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Code # 6680

(61)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Fraser County: LAWRENCE State: OHIO

Contact Name: Don Murphy Phone No: 614 533-4087

Description of Waste: Silicate & Soaps

Date Shipped: 12-10-96 Quantity Shipped: 50,740 ⁶⁻⁸

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-10-96

Transporter (No. 1): BWC Trucking Co. Street Address: WHEELERSBURG, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Stacy Howard Date: 12-10-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Silicate & Soaps

Date Received: 12/10/96 Quantity Received: 25.84

Facility Signature: J. D. Kelley Date: 12/10/96



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1500 North Big Run Road
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Code # 6680

(59)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Ironton County: Lawrence State: OH

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soil

Date Shipped: 12-10-96 Quantity Shipped: 47,060

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-10-96

Transporter (No. 1): BWC Trucking Co. Street Address: Wheelersburg, OH

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Stacy Howard Date: 12-10-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soil

Date Received: 12/10/96 Quantity Received: 23.48

Facility Signature: Randy Kelley Date: 12/10/96



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Code #

6680

(57)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Davi Chemical Street Address: Old US 52

City: Treaty County: Lancaster State: KY

Contact Name: Don Murphy Phone No: 614-533-4687

Description of Waste: Sludge & Soils

Date Shipped: 12-10-96 Quantity Shipped: 52,450

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald N Murphy Date: 12-13-96

Transporter (No. 1): BWC Trucking Co. Street Address: 1150 Loranchuk, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5437

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Stacy Howell Date: 12-16-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: _____

Date Received: _____ Quantity Received: _____

Facility Signature: _____ Date: _____



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Code # 6680

(124)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 50

City: Eaton County: LAWRENCE State: OHIO

Contact Name: Dave Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soil

Date Shipped: 12-10-96 Quantity Shipped: 45,760 ^b

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-10-96

Transporter (No. 1): BWC Trucking Co. Street Address: WHEELERSBURG, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: S. Rogers Date: 12-10-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: 173

Date Received: _____ Quantity Received: 2391

Facility Signature: Bonita Date: 12-10-96



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Code #

6682

(62)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old 11552

City: Fronton County: Lawrence State: OHIO

Contact Name: Dow Murphy Phone No: 1-14-533-4087

Description of Waste: Sludge & So. LS

Date Shipped: 12-10-96 Quantity Shipped: 51,120 G-10

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-10-96

Transporter (No. 1): BWC Trucking Co. Street Address: Wheelersburg, OHIO

Contact Name: Randy Kelley Phone No: (614) 574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Mike Richards Date: 12-10-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & So.

Date Received: 12/10/96 Quantity Received: 25.52

Facility Signature: Randy Kelley Date: 12/10/96

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35

WASTE SHIPMENT TRACKING DOCUMENTSource (Generator): Don ChemicalStreet Address: Ohio 18, 52City: SteinerCounty: WashingtonState: OhioContact Name: Don MurphyPhone No: 604-533-1087Description of Waste: Sludge & SoilsDate Shipped: 11-22-96Quantity Shipped: 51,680

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald N. Murphy Date: 11-22-96Transporter (No. 1): BWC Tracking CoStreet Address: Wheelersburg OhioContact Name: Randy KelleyPhone No: 604-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Mike Roberts Date: 11-22-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KYContact Name: Randy Kelley Phone No: (606) 928-0239Description of Waste: 98645Date Received: 11-23-96 Quantity Received: 2592Facility Signature: John D. Date: 11-23-96



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Code # 6680

(23)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical

Street Address: 10 US 52

City: Ashland

County: Lawrence

State: Ohio

Contact Name: Don Murphy

Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-22-96

Quantity Shipped: 51,140 BuC G-8

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy

Date: 11-22-96

Transporter (No. 1): BuC Tracking Co.

Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley

Phone No: 614-524-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Stacy Howard

Date: 11-22-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: 98Lc39

Date Received: _____ Quantity Received: 2540

Facility Signature: Donita Date: 11-22-96

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Code # 6680

(22)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ohio US 52

City: Porter County: Lawrence State: Ohio

Contact Name: D. Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-22-96 Quantity Shipped: 48,760

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 11-22-96

Transporter (No. 1): BWC Tracking Co Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Donald Parney Date: 11/23/96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: 98643

Date Received: _____ Quantity Received: 2420

Facility Signature: Bonita Date: 11-23-96



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Code # 6680

(24)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: 100 US 52

City: Leeds County: LAWRENCE State: Ohio

Contact Name: Do Murphy Phone No: 644-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 11-22-96 Quantity Shipped: 43.500

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald N. Murphy Date: 11-22-96

Transporter (No. 1): BWC Towing Co. Street Address: Wheelersburg Ohio

Contact Name: Randy Kelley Phone No: 644-544-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: J. W. Thomas Date: 11-22-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

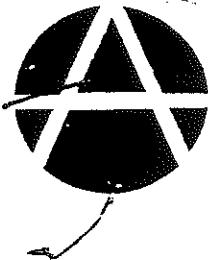
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: 98438

Dr. Received: 1 Quantity Received: 21.65

Facility Signature: Don L. Date: 11-22-96



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Code # 6680

(53)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Trenton County: Lawrence State: OHIO

Contact Name: Dow Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 12-4-96 Quantity Shipped: 46,520 ⁺⁵⁰

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Ronald N. Murphy Date: 12-4-96

Transporter (No. 1): BWC Trucking Co. Street Address: WHEELERSBURG, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Mary Church Date: 12-4-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 12/4/96 Quantity Received: 2312

Facility Signature: Randy Kelley Date: 12/4/96



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Code #

6680

(45)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Trenton County: Lawrence State: KY

Contact Name: Dan Murphy Phone No: 614-533-4087

Description of Waste: Sludge + Soils

Date Shipped: 12-4-96 Quantity Shipped: 49,600

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Daniel H. Murphy Date: 12-4-96

Transporter (No. 1): Busc Trucking Co. Street Address: Wheelersburg, OH

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Marty Church Date: 12-4-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge + Soils

Date Received: 12/4/96 Quantity Received: 24.80

Facility Signature: Scott Dugay Date: 12/4/96



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1500 North Big Run Road
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Code # 6680

(49)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Trotter County: Lawrence State: OHIO

Contact Name: Dow Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 12-4-96 Quantity Shipped: 49580 510

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-4-96

Transporter (No. 1): BWC Trucking Co. Street Address: Wheelersburg, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Mary Chmel Date: 12-4-96

Other Handlers (Transfer Facility): Street Address:

Contact Name: Phone No:

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: Quantity Shipped:

Facility Signature: Date:

Transporter (No. 2): Street Address:

Contact Name: Phone No:

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: Date:

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 12/4/96 Quantity Received: 24.75

Facility Signature: Date: 12/4/96



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1500 North Big Run Road
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Code # 6680

(42)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Etna County: Lawrence State: OH

Contact Name: Dow Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 12-3-96 Quantity Shipped: 49,850

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-3-96

Transporter (No. 1): BINC Trucking Co. Street Address: Whistlersburg, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Randy Kelley Date: 12-3-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

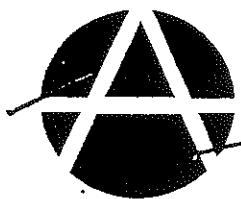
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 12/4/96 Quantity Received: 24.75

Facility Signature: Randy Kelley Date: 12/4/96



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Code # Q680

(54)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Frostover County: Lawrence State: OHIO

Contact Name: Dave Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 12-4-96 Quantity Shipped: 49,020 BWC 509

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-4-96

Transporter (No. 1): BWC Trucking Co Street Address: WHEELERSBURG, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5483

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Jerry W. Thomas Date: 12-4-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

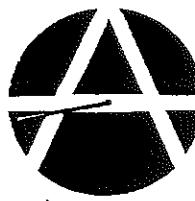
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: 99540

Date Received: _____ Quantity Received: 2443

Facility Signature: Davis Date: 12-4-96



Green Valley Environmental Corp.

1500 North Big Run Road
Ashland, KY 41102
Telephone (606) 928-0239
Fax (606) 928-1239

Code # 6680

(5a)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Troyton County: Lawrence State: OHIO

Contact Name: Dan Murphy Phone No: (614) 533-4087

Description of Waste: Sludge & Soils

Date Shipped: 12-4-96 Quantity Shipped: 52,240

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald N. Murphy Date: 12-4-96

Transporter (No. 1): BWC Trucking Co. Street Address: Wheelerburg, OHIO

Contact Name: Randy Kelley Phone No: (614) 574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Jerry W. Thomas Date: 12-4-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

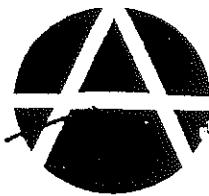
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 12/4/96 Quantity Received: 26.09

Facility Signature: Don Doug Date: 12/4/96



Green Valley Environmental Corp.

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Code # 6680

(46)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Ohio US 52

City: Troy County: Lawrence State: OHIO

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 12-4-96 Quantity Shipped: 48 380 509

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald N. Murphy Date: 12-4-96

Transporter (No. 1): BWC Trucking Co. Street Address: Wheelerburg, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Jerry W. Thomas Date: 12-4-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 12/4/96 Quantity Received: 24.15

Facility Signature: John Dugay Date: 12/4/96



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Code # 6680

(44)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Fremont County: Lawrence State: Ohio

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 12-4-96 Quantity Shipped: 50,700 BWC 5cs

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald N. Murphy Date: 12-4-96

Transporter (No. 1): BWC Trucking Co. Street Address: Wintersburg, Ohio

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Paul McDonald Date: 12-4-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 12/4/96 Quantity Received: 25.1X

Facility Signature: J. Miller Date: 12/4/96



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Fax (606) 928-1239

Code # 6680

(43)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Frostburg County: Lawrence State: OHIO

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge + Soils

Date Shipped: 12-4-96 Quantity Shipped: 51140 BWC 504

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-4-96

Transporter (No. 1): BWC Trucking Co. Street Address: Wheelersburg, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: BRYANT BUSTETTER Date: 12-4-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

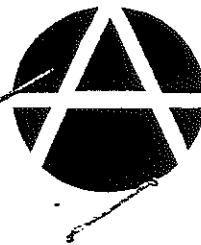
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: _____

Date Received: _____ Quantity Received: _____

Facility Signature: _____ Date: _____



Green Valley Environmental Corp.

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Fax (606) 928-1239

Code # 6680

(51)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Frostover County: Lawrence State: OHIO

Contact Name: Dan Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 12-4-96 Quantity Shipped: 47,820 ^{BWC #10}

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald N. Murphy Date: 12-4-96

Transporter (No. 1): BWC Trucking Co Street Address: Wheelerburg, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Allen Stone Date: 12-4-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

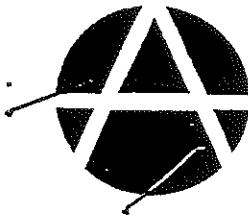
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 12-4-96 Quantity Received: 23.86

Facility Signature: Joe D. B. Date: 12-4-96



Green Valley Environmental Corp.

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Ashland, KY 41102
Telephone (606) 928-0239
Fax (606) 928-1239

Code # 6688

(47)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Trotton County: Lancaster State: Ohio

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge + Soils

Date Shipped: 12-4-96 Quantity Shipped: 43,860 BWC 10

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald P. Murphy Date: 12-4-96

Transporter (No. 1): BUC Trucking Co. Street Address: Wheelersburg, Ohio

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Gillen Stone Date: 12-4-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

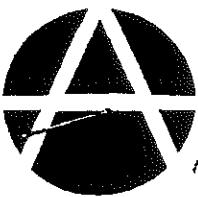
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Soil & Sludge

Date Received: 12/4/96 Quantity Received: 21.75

Facility Signature: John P. Murphy Date: 12/4/96



Green Valley Environmental Corp.

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Fax (606) 928-1239

Code # 6680

(52)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Trotter County: Lawrence State: OHIO

Contact Name: Dow Murphy Phone No: 614-533-4057

Description of Waste: Sludge & Soils BWC #9

Date Shipped: 12-4-96 Quantity Shipped: 51,440

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-4-96

Transporter (No. 1): BWC Trucking Co. Street Address: WHEELERSBURG, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: J. Kelley Date:

Other Handlers (Transfer Facility): Street Address:

Contact Name: Phone No:

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: Quantity Shipped:

Facility Signature: Date:

Transporter (No. 2): Street Address:

Contact Name: Phone No:

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: Date:

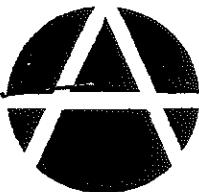
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 12/4/96 Quantity Received: 25.71

Facility Signature: Date: 12/4/96



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Code # 6680

48

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Trenton County: Lawrence State: OHIO

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: Quantity Shipped: 49,400

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-4-96

Transporter (No. 1): BWC Trucking Co Street Address: WHEELERSburg, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Randy Kelley Date: 12-4-96

Other Handlers (Transfer Facility): Street Address:

Contact Name: Phone No:

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: Quantity Shipped:

Facility Signature: Date:

Transporter (No. 2): Street Address:

Contact Name: Phone No:

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: Date:

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 12/4/96 Quantity Received: 24.6

Facility Signature: Date: 12/4/96



Green Valley Environmental Corp.

1500 North Big Run Road
Ashland, KY 41102
Telephone (606) 928-0239
Fax (606) 928-1239

Code # 6680

(38)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Fronton County: Lawrence State: OHIO

Contact Name: Don Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 12-3-96 Quantity Shipped: 47220 510

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-3-96

Transporter (No. 1): BWC Trucking Co Street Address: Wheelersburg, OHIO

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Marty Church Date: 12-3-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

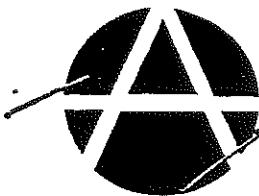
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 12/3/96 Quantity Received: 23.56

Facility Signature: _____ Date: 12/3/96



Green Valley Environmental Corp.

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Fax (606) 928-1239

Code #6680

(34)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 32

City: Trenton County: Lawrence State: OHIO

Contact Name: Dan Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 12-3-96 Quantity Shipped: 47,640 510

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Dan Murphy Date: 12-3-96

Transporter (No. 1): BWC Trucking Co Street Address: Wintersburg, Ohio

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Marty Chmel Date: 12-3-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

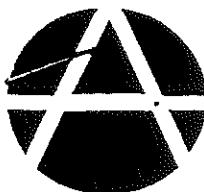
Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Sludge & Soils

Date Received: 12/3/96 Quantity Received: 23.72

Facility Signature: [Signature] Date: 12/3/96



Green Valley Environmental Corp.

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Fax (606) 928-1239

Code # 6680

(40)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Frazer County: Lawrence State: OHIO

Contact Name: Dow Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soil

Date Shipped: 12-3-96 Quantity Shipped: 50,080

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-3-96

Transporter (No. 1): BWC Trucking Co Street Address: Wheelersburg, OH

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Jim Morris Date: 12-3-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: 99398

Date Received: _____ Quantity Received: 2485

Facility Signature: Bonita Date: 12-3-96

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Fax (606) 928-1239

Code # 6680

(37)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Don Chennel Street Address: Old US 52

City: Troyton County: LAWRENCE State: OHIO

Contact Name: Don Murphy Phone No: (614) 533-4057

Description of Waste: SLUDGE & SOILS

Date Shipped: 12-3-96 Quantity Shipped: 43,480 ⁵⁰⁹

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-3-96

Transporter (No. 1): BWC Trucking Co. Street Address: Wheelerburg, OHIO

Contact Name: Randy Kelley Phone No: (614) 574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Jerry E. Luerner Date: 12-3-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: Soil & Sludge

Date Received: 12/3/96 Quantity Received: 2162

Facility Signature: Randy Kelley Date: 12/3/96



Green Valley Environmental Corp.

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Code # 668-0

(H1)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Frankfort County: LAWRENCE State: OHIO

Contact Name: Don Murphy Phone No: (614) 533-4087

Description of Waste: Sludge & Soils

Date Shipped: 12-3-96 Quantity Shipped: 50,440 BWC 503

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Donald H. Murphy Date: 12-3-96

Transporter (No. 1): BWC Trucking Co. Street Address: WHEELERSburg, OHIO

Contact Name: Randy Kelley Phone No: (614) 524-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: Paul McDavid Date: 12-3-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: 99395

Date Received: _____ Quantity Received: 2512

Facility Signature: B. Chiles Date: 12-3-96



Green Valley Environmental Corp.

1500 North Big Run Road
Ashland, KY 41102
Telephone (606) 928-0239
Fax (606) 928-1239

Code # 6680

(39)

WASTE SHIPMENT TRACKING DOCUMENT

Source (Generator): Dow Chemical Street Address: Old US 52

City: Fronton County: Lawrence State: OH:O

Contact Name: Dow Murphy Phone No: 614-533-4087

Description of Waste: Sludge & Soils

Date Shipped: 12-3-96 Quantity Shipped: 45,920 BWC 304

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Generator's Signature: Ronald H. Murphy Date: 12-3-96

Transporter (No. 1): BWC Trucking Co Street Address: Wheelerburg, OH:O

Contact Name: Randy Kelley Phone No: 614-574-5487

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Hauler's Signature: BRYANT BUSTETTER Date: 12-3-96

Other Handlers (Transfer Facility): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Quantity Received: _____ Quantity Shipped: _____

Facility Signature: _____ Date: _____

Transporter (No. 2): _____ Street Address: _____

Contact Name: _____ Phone No: _____

Certification: I certify that no regulated hazardous waste or infectious waste was knowingly introduced into the waste while in my custody.

Driver's Signature: _____ Date: _____

Disposal Facility: Green Valley Environmental Street Address: Ashland, KY

Contact Name: Randy Kelley Phone No: (606) 928-0239

Description of Waste: 99-93

Date Received: _____ Quantity Received: 22.92

Facility Signature: Bonita Date: 12-3-96

APPENDIX D

Daily Logs of Construction Activities

CC-
5

DAILY FIELD REPORT

Date: 11-14-96

15-X

Project #: 109-72

Project: DCW Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. HART

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: On-site today: M. Hart; R. Kisor; J. Carpenter; Barney B.



Record of Activities

1600: Crew on-site. R Kisor and J. Carpenter taking H+S
course through Dow.

1605 : First truck w/ #305 stone - dumped and delivered.

1610 : M. Hart - checked in with Dennis Stanley and
Jeff Stegman. We offered to doze soil out & way
for trailers. Dow offered a 6" stone material
to use for cross-over improvement.

1630: Showed crew around fire pond area. Went over
plan for the week, H+S issues and work
strategies. Set up tool trailer in parking lot
across from fire pond - okay w/ Dow.

1645: Second truck (25 tons) w/ #4 stone - dumped and delivered.

1705: Crew signed mt - off-site. To hotel in Ashland.

Significant Events

50 tons stone delivered

D5 also on-site when we arrived.

17³⁰

3 + 15

DAILY FIELD REPORT

Date: 11/15/96

Project #: 109-72

Project: Dew Fire Pond
Demolition

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: On-site today w/E.C.-M.Hart; R.Kisor, J.Carpenter;
Barney Brown - Foreman



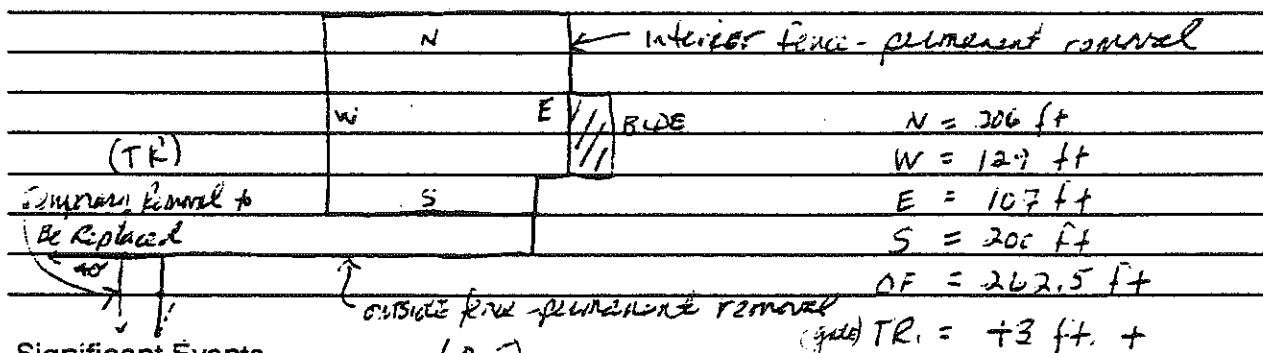
Record of Activities

0645 - M.Hart on-site

0700 - Crew on-site, obtained P/Must for fence removal and Port
works and sample collection.

0715 - Began taking down outside perimeter fence - south side. Using
acetylene torch to cut posts at ground surface

0830 - Measured fence to be taken down. (See diagram)



Total Fence removed = 504.781 ft - incl. temp remove
~ 904.5 ft - not incl. gate

1/93 HSTAFF:SGGETSMISCDFR

Total fence removed including temporary salvaged
 pt 1 of 2 = 1007.50 feet

DAILY FIELD REPORT

Date: 11/15/92

Project #: 109-72 Project: Dev. Fire Pond
Remediation

EnviroClean

Site Manager: M. Hart Signature: M. Hart

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:



Record of Activities

- 0900 - Paul Gebhard on-site to collect samples. Sent f. Carpenter to get drain pipe (Ashland) and more acetylene and O₂ for torch (Huntington).
- 1000 - Sample could not be collected. Sludge too wet at bottom. At least 3 additional feet at bottom of pit. Paul off-site @ 1000. Barny and Rusty continue to work on fence removal.
- 1220 - Lunch Break. 14-12
- 1345 - KOBELCO arrives from NEMO's. Off-loaded.
- 1425 - outfit fence line - 262.5 ft - down, rolled and stockpiled on slope.
- 1430 - Unloading 1-ton of drain pipe - 24" - 20' and fuel tank. place drain pipe in ditch.
- 1445 - Received work permit extension until 6:00 by DDW.
- 1600 - Finish fence down approx 3/4. Begin cleaning up job site and place posts for "caution" tape around fire pond.
- 1630 - Crew off-site. Rusty @ 1630; Myn, Barny, Wh. @ 1630

P 2 P 2

DAILY FIELD REPORT

Date: 11/18/96

Project #: 109-72

Project: Dow Fire Ponds
remediation

EnviroClean

Site Manager:

M. Hart

Signature: [Signature]

EnviroClean-Midwest, Inc.

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(614) 433-0886 (Fax)



Notes:

On-site Blay from P.C. - Miga Hart, Randy Kisor
Barney Brown.

Raining - drizzle. Soil very wet.

Record of Activities

7:00 - B. Brown in-site.

1105 - M. Hart m-site. Requesting Dow personnel to issue work permit.

1130 - R. Kisor in-site.

1145 - Called Green Valley for disposal arrangements.

1145 - Found someone at guard house to issue permit. Wouldnt take reading of C. immediately. Wanted until 12 as he said he couldnt leave his position to take C. reading. No work done. Down for 45 minutes.

1200 - Lunch

1300 - Back from lunch. Walking main pipe. 3 invent contained at WWTP.

1410 - Entered south end part of east fence lower. B. Brown to checklist for drain pipe.

Significant Events

1440 - B. Brown return w/ pipe. Done from Dow has application for above drainage at Green Valley. He says he will sign it, leave at the guard house, and call Randy Kisor to pick it up.

1/93

1STAFFISGBETSUMISCIDFR

3+3

Brown

page 1 of 3

1/18 - Red Ridge - Russell
Canyon (inside fence) #65 + Grade

DAILY FIELD REPORT

Date: 11/18/96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

450 W. Wilson Bridge Road
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(614) 433-0886 (Fax)

Notes:



Record of Activities

- 1630 - Met w/ Whit fence down. Putting up existing fence.
James Hagen from onsite here at 7:00 am. to replace
posting
- 1700 - Site secured.

Hours Today

B. Brown Travel = 3.0 hrs; on-site 7:30 - 5:15
R. Kuhn Travel = 3.0 hrs; on-site 11:30 - 5:15
M. Hart Travel = 3.0 hrs; on-site 11:00 - 5:15

- 1705 Spoke w/ Paul Leibhart of ERM to review
work to date. Will keep him posted.

Significant Events

- * 30' Draw post in place and secured.
- * Sarah and interns of last and next fence down.
- * Disposal applications will now have to be thermal or to recyclable
hazardous.

pmj JGJ

DAILY FIELD REPORT

Date: 11/19/96

C-2

Project #: 109-72

Project: Don Fire POND
REMEDIALION

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes: On-site today from E.C.; M. Hart; Barry Braxx;
James Hagan (On-Site).

Record of Activities

- 0700 - (M.H.) on-site. Obtained work permit from Don Murphy.
1015 - FENCE gate near access over her fence removed and
Stockpile to be re-built by Don. One fence pole
broken (and fixed).
1100 - Called Green Valley Landfill. Randy Kelly said he just got the
Signed copy of the Apptie. but the sample cont'l form wasn't
Signed. Will drop it off again & sign the cont'l. Let Don Murphy
know to look for it and sign it.
- 30 T sandblast to be delivered today and 60 T delivered
tomorrow morning.
- Diesel fuel to be delivered 11/20/96 am.
- Talked to Steve Houston. As of yet he hasn't prepared a
change order for moving the stockpile soil as
backfill to fire pond. ERM is aware a change order will
be coming.

Significant Events

- 1300 - Lunch till 1400.
1515 - Tractor trailer of sandblast arrived. Dug at SW end of pond.
1600 - Called Randy Kelly, a landfill. Not in. Left a detailed
message w/ Secretary to begin running trucks for disposal
1700 Thursday am.

HSTAFF SGBETS MISCDPR

page 1 of 2

DAILY FIELD REPORT

Date: 11/19/90

Project #: 109-72

Project: Day The Ponds
Remediation

EnviroClean

Site Manager: M HART

Signature: HAGA

EnviroClean-Midwest, Inc.

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Columbus, OH 43085
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(614) 433-0886 (Fax)

Notes:



Record of Activities

1545 Sawdust-truck trailer arrived. Unloaded off-site c 1615.
1630 - Talked w/ Steve Heaton will cost a D25 D
dump truck and a 935 953B track loader for
backfilling. Will tentatively schedule for Monday
11/20/90 delivery. I will help locate local
source for the equipment.

1640 Called Steve Heaton again said I needed an operator
next week to replace M-Site (Jones Hayes) he said some
guys available off Cascade next week.

1730 - First load sawdust mixed w/ sludge. Crosscut completed.

1735 - Left message w/ Paul Gibbons of EPL to come collect a
sample Wed, 20th, afternoon. and will call again tomorrow.

1800 - Paul Gibbons called - will be on-site after 10⁰⁰ to collect samples. Also said
Significant Events

- 1- All but ~75 ft of fence down + rolled, stockpiled
2- 1 load sawdust dumped + dispersed
3- C.0255 - over completed. H.A.D. - ~~~20 yds (30 T)~~ of large stone (4")
from site stockpiles. Sludge solidification Begun.

1/19/93 1STAFFISGBETSMISCDFR

B. Brown 7-5³⁰

J. Hayes 7-5³⁰

M. Hart 7-5³⁰ (+) P.M. 1 hour

page 2 of 2

DAILY FIELD REPORT

Date: 11/20/96

Project #: 109-72

Project: Dow Fine Pond
Remediation

EnviroClean
Site Manager:

M. Hart

Signature: M. Hart

EnviroClean-Midwest, Inc.

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Columbus, OH 43085
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(614) 433-0886 (Fax)

Notes:

Enviroclean - Mys Hart, Barney Brown, James Hagan(On-Site)



Record of Activities

0700 - Crew on-site. On load sandblast m-sit and off-loaded.
0740 - On-site - Randy Keller. Spoke w/ him regarding work. He said approved Dow to dispose soil and sludge. Trucks will come in tomorrow morning. Can call today if we need some more sandblast. He said that if Dow requires weighing trucks in and out then there will be a demurrage charge. I asked for price and he said he'd get them to me. He also said he'd talk to Don Murphy regarding scaling trucks. Want to load 30 T in each tractor trailer. Mr. Keller also said he has sand for backfill. Can go to Lick Cloud. Will deliver on-call. Finally, he said he has an articulated dump and truck license #631953 to rent. Will call me or Steve Hagan with prices. I also told Mr. Keller that Dow require a non-hazardous waste manifest with each truck.

0805 - Copied Daily Field Report through 11/19/96 and placed them in Dennis Stanly's mailbox - WWTB Building.

Significant Events

0900 - Began backfill sandblast w/ sludge. M. Hart at J. Hagan waiting on fence and dozer pricing when necessary.
BT on-site to fuel equipment and fill fuel tank.

DAILY FIELD REPORT

Date: 11/30/96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean

Site Manager: MHAR1

Signature: [Signature]

EnviroClean-Midwest, Inc.

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Notes:



Record of Activities

955 - Called Mike Hester, left message regarding name or yard of 19' Barbin Fish and who what Randy Killy of Green Valley may have equipment and will call back with info.

1005 - Friday delivery of 953 and dump. Steve called. Monitor when we can get done at excavation to come to another job.
By Friday.

1020 - Tractor trailer w/ sandblast missed to drop load. Off site @ 1043

1035 - Spoke w/ Rick Cloud (F.C.). Let him know of local equipment suppliers. Give him phone #3 4661. I let him know that I have only one operator (Barney) committed for morning and till end 2-3 more.

1050 - Rick Cloud called, will confirm backfill price at Road, Kelley and confirm delivery. Cannot commit to quantities at this time.

Significant Events

1155 - Tractor trailer w/ sandblast missed @ 1155. Dump load off site @ 1205. Dump his load w/ tarp on tractor. Appears to be damaged; large hole in top.

1200 - Called Randy Killy - asked for 3 loads more sandblast. Said he's busy but may only be able to get 2 trucks. I said bring what he could.

INSTAFFISGBETSIMISCDFR

77 pg 4

DAILY FIELD REPORT

Date: 11/20/96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean

Site Manager: MTHAI

Signature: JFC

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ERM

Notes: Today - Sludge Solidification

Record of Activities

1225. Spoke with Jeff Stegman indicated that we appear to have a lot more sludge quantity than originally estimated. Slurp soil + solids w/ Jeff Stegman and make sure aware that we must bill by quantities.

1240 - Lunch till 1340 Paul Lebhand of ERM m-sd to collect soil samples.

1245 - Spoke with Jeff Stegman. I told him that estimated quantities of Sludge were low, that qtrs may almost double because sludge very wet and more than anticipated. I let him know that we could stop anytime until approval - but he said we need to finish work.

1307 - Tractor trailer on-site w/ sandblast. Saved a turtle from the pit. Total of c 330 (1530)

Spoke w/ Paul Lebhand. I let him know that Monday was the day we plan to start backfilling. And that we need samples run and approval by Friday. He said he'd Significant Events

call lab and determine turnaround time today before he left. I let him know how critical our schedule was.

1530 - Called Randy Tracy. Cancelled last load of sandblast. Also ordered 5 trucks for tomorrow am, staggered ~15 min apart. Also ordered 6 trucks afternoon (100pm).

INSTAFFSGBETSIMISCDFR

DAILY FIELD REPORT

Date: 11/20/96

Project #: 109-72

Project: Dow - Fire Pond
Remediation

EnviroClean

Site Manager:

M. Hart

Signature: [Signature]

EnviroClean-Midwest, Inc.

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Notes:

Completed 1 roll - 9 film - 24 exposures

Record of Activities

1530 - Total sandbar needed to solidify sludge = 88.67 tons
1630 - Paul (whom Off-site collected the four soil samples he
needed for analysis. He said he called the lab and
urged them to finish his work for him if he got the
samples there by tonight. He said he'd call me tomorrow
and Friday.

Barney and Janice are solidifying sludge and putting a
load road in pit (ramp) for truck in the
morning.

1645 - Talked w/ Chris Hartford. I will be getting 2 laborers tomorrow
and a truck to complete fence removal activities.
1/2 day and overnight. Delete hotel room.

1800 - Off-site Turn in Permit to Dow - Daily

Significant Events

* - Solidification complete

* - Fence down

* - ERM Samples obtained

1/93

CREW 7²/₂ hr - 6³⁰/pm

1STAFF 2STAFF 3STAFF 4STAFF

p. 4 of 4

DAILY FIELD REPORT

Date: 11/21/96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean

Site Manager: M. HART Signature: MH

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Notes:

On-site today. Barney Brown, James Hagan,
Myra Hart, Alan Bridges, Chuck Bradley.

Record of Activities

0700 - On-site. First truck here. Raining. Appears to be okay
to haul. D. Stanley issues today's work permit.

0715 - Four trucks on-site loaded in. First one loaded 730

0730 - Gave a copy of the Cherry Order #1 to Connor Stanley
who said he would make a copy and give 4th
other copy to Jeff Stegman for signature.

Trucks having a little difficulty getting out of the
pit on the ramp due to rain and slick clay. Barney
taking some time to work on the ramp. Time to pull the
second truck out, re-stabilize the dump so trucks don't
have to go all the way down the ramp.

0745 - Two more dump trucks on-site.

Significant Events

0800 - Loading sixth truck.

0915 - Seven trucks total. Waiting on 8th to arrive. Connor
Stanley to receive 4 more trucks this morning. He said he'd
just keep taking trucks around.

DAILY FIELD REPORT

Date: 11/21/96

Project #: 109-72

Project: Dow Fire Pond

EnviroClean

Site Manager: M. Hager

Signature: [Signature]

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road

Columbus, OH 43085

(614) 848-4494

(614) 433-0886 (Fax)

Notes:



Record of Activities

~130 - called Skidderman. Confirmed our conversation from yesterday and staffing for Monday.

Spoke with Dennis Stanley. He said he would communicate to Jeff Stegeman that we have ~ 7X the estimated amount of slag.

1020. Excavating out sump while waiting for trucks. Sump consists of a steel pipe - 3-5' diameter and concrete to ~ 4' thick. (Photos). Bid says nothing about sump. chose to remove it since not filled w/ slag.

Yesterday when I spoke w/ Jeff Stegeman, we agreed that the fence that will be put back up after work will need to be moved to utilize road improvements DOW and replace fence. EnviroClean will not replace any fence. We agreed initially ~~w/ E.C.~~ not replacing any fence.

Significant Events

1035 Three more trucks in.
Truck # 510 weighed out and is back to ~~filled~~, unload. Too heavy dust out.

1055 - Truck # 510 Back again - 2,000 lbs heavy still.

INSTAFFISGBETSIMSCDFR

DAILY FIELD REPORT

Date: 11/21/96

Project #: 109-72 Project: DOW FIRE POND

EnviroClean-Midwest, Inc.

EnviroClean
Site Manager: M HART Signature: [Signature]

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: Weather - rain, sleet, cold, hail



Record of Activities

Talked with Dennis Stanley. He requests that the large iron pipe formerly connected with sewer pipe leading to pond (SE corner of pit) be put in with scrap metal on-site.

1130 - Spoke with Paul Fehlauer. Said Analytical will be in Friday afternoon to receive soil samples on-site. Okay.

1230 - Alan Brings and Chuck Dudley on-site. Went through Hots passing by Dow.

1245 Truck L900 - back not working properly so back onto Barney having to send me helping him fix it so I didn't wait fall out track.

1300 Landfill fully loaded. No more from truck in until 11 AM to get to landfill so no more trucks from site until 3:00. So I made truck loads today. Start again tomorrow.

Significant Events

Truck #L900 - unloading it entirely off site empty c1305.
Broken hatch.

1310 - Home from Back from Lunch Return Barney.

1335 - Had work permit modified for Pm Murphy for plant check

DAILY FIELD REPORT

Date: 11/21/96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: MHart

Signature: MHart

450 W. Wilson Bridge Road
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Notes:



Record of Activities

- 1335 - B. Bins cut in land. Hauled in excavator loading trucks
Total steel buster mowers ready to backfill Monday. Delay imminent until Monday after Thanksgiving.
Tuesday. Delay work since 4am is a lot more sludge present than estimated.
1430. Dan + Chuck working on cutting pipe in pond, sweeping the fence materials.
- 1500 Last truck cut today. Not yet finished with sludge removal. Appears to be 200 more tons yet.
- Spoke w/ Dave and Jeff Stegman. They are aware of how much sludge has been hauled off site today and how much sludge remains. Today total sludge removal = 480 tons.

Significant Events

- Crew continue working on removing scrap metal and removing sludge and rock in pond.
- 1530 - Talked to Green Valley L.C. They say sludge is coming - with the next T asked to have him send 1 load of sand/dust in the morning.

INSTAFFISGBETSIMISCIOFA

DAILY FIELD REPORT

Date: 11/21/96

Project #: 109-72

Project: Dow Fire Pond
REMEDIALION

EnviroClean

Site Manager: MTHET

Signature: MCH/ats

EnviroClean-Midwest, Inc.

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(614) 433-0886 (Fax)



Notes:

432.45
TONS OFF
today's sludge
only

Record of Activities

1315 - Based on weight tickets from Dow 432.45 TONS of sludge
hauled today. Called back truck at office. Equipment
was cancelled until Dec. 2, Monday after Thanksgiving.

1355 - Spoke with Paul Gebhard and summarized daily events.

1425 - Ordered O₂ & Antifreeze for tomorrow delivery @ 10-11^{AM}.
Also reserved Jack Hammer & Compressor to be picked up
between 800 and 900 return by 4^{PM}.

Need Jack hammer to break up concrete pump and drainage
pad from NE side of pit corner.

1600 Spoke w/ Dennis Stanley. He said that "he" called EnviroClean
wishing to set a meeting Monday at Enviro Clean's office since
they need to get the extra money allocated.

Significant Events

1830 - Crew off-site Triton parts in mud. Fence missing-old -
cell in Dow's scrap dump truck.

1793

Clew 7⁰⁰ - 6⁰⁰

INSTAFFSGBETSMISCIOR

DAILY FIELD REPORT

Date: 11/22/96

Project #: 109-72

Project: Dow Fire Pond
REMEDIALION

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. HART

Signature: M. HART

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

0700 B. Brown, J. Hagan, M. Hart a-site. Tractor trailer w/
sandust delivered and dumped. Off @ 710am. Obtained
work permit for today from Dow.



B. Brown tightening tracks on YRE Roseco. informed Dan Murphy that we
will be transporting soil monday - wednesday next week.

Record of Activities

0715 Called Rick for extra cash but I don't need it - just remembered.

0905 First truck in-situ. No initial paperwork associated with
the truck. Called Kirby Kelly. Said he never knew and
wanted am working @ 10am. I said we discuss. Called
Kirby @ 10am and would provide the paperwork. He said
it's next truck to bring the paperwork. I told him
to send annh 47 today and have done next
week @ trucking with his next truck first light
at landfill.

0900 BP on-site to fill yard tank and equipment.

Told the truck driver w/ sludge what I called for more paperwork.
To go without: if Dow holds him up at the gate, call his
supervisor and let him know.

0910 Sent Alan and Chuck to Fishland to pick up lockbox
and computer. Not back yet. Opened at 0800.

Significant Events

0930 BP left site - loaded up truck. Off-site.

1015 Valley National Glass dropped a 20' tank and took empty one.
Kirby Kelly showed up with his landfill forms. Since he
didn't let them know what we were off until this morning,

1100 agreed to pay demurrage on 1 truck that waited
from 900 to 1030 to get loaded and off site.

1145 Alan and Chuck back from rental place. Said the company
was slack about safety items on the vehicle hitch. Like note
not to use them again.

INSTAFFISGETSWISCDIFR

0 1 2 3

#509
Concrete

DAILY FIELD REPORT

Date: 11/22/96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager:

Myer Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:



Record of Activities

1240 Sent James to Lumm. Alan back from getting new tip for jackhammer. Raking tracks.

Randy Kelly called requested that concrete blower be loaded into 1st Truck #509 (Black & Decker 9600 collins + sons) since it has a stabilizer. Told Randy I would call him tonight for Monday schedule.

1305 Randy Kelly from landfill called. Trucks are complaining that haul road so bad they tearing up tracks. I told him only 1 truck stuck today. They're parked on flat ground. I will try to get some stone on the road if possible. He said ok. I explained what I don't think trucks are getting them up.

1305 Put Chuck in the excavator. James spent > 1 hr at lumm so far.

1345 - Jackhammer is not working efficiently on concrete sump. Ask Dow if we can decom it and put it back in the Significant Events

PAL. aluminum need to rent or backhoe w/ Ram hoe to break it up.

1350 - Talked to Paul Kiehard. Said soil samples from bottom of pond are clean - non-detect. Also he could see here not work for a "surprise" inspection. We discussed putting concrete back in pond and backfilling. We will hear you idea by Dennis ~~Stevens~~ or Jeff Stegman.

1/83 STAFF/SGBETS/MISC/DFR

DAILY FIELD REPORT

Date: 11/22/96

Project #: 109-72

Project: DON FIRE POND
Demolition

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. HART

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

1. Call OJ Art
2. Call with cash west week



Record of Activities

1350 - Barney firm to lunch. Chuck on dozer, James on excavator.

1500 - Clean up. Chuck off-site. To return compactor and hammer (1.5 hrs to Ahlens + Back & forth) + 3 hrs travel

Called Valley Natural - can pick up tanks - they said Monday.

Called Randy Kellner - left message to not schedule any trucks for Monday. Will call Monday for Tuesday schedule.

Last truck mt. Securing site for weekend. Told Dan Murphy no trucks out for Monday.

Total Sludge today = 295.36 TONS

Total Soil today = 97.54 TONS - All of bottom of pond removed and disposed.

Therefore - Total Sludge disposal (transportation / solidif) = 727.81

Significant Events

Alan 7³⁰ - 7³⁰ - No lunch = 12 hrs

7.5

4.5

2.0

Chuck 7³⁰ - 7³⁰ - No lunch = 12 hrs

7³⁰ - 7³⁰ - Yes lunch = 11.5

7³⁰ - 7³⁰ - Yes lunch = 11.5

James H. 7³⁰ - 7³⁰ - Yes lunch = 11.5

includes travel
includes travel
includes travel

P 7 of 3

DAILY FIELD REPORT

Date: 11/25/96

Project #: 109-72

Project: Don Fire Pave
Demolition

EnviroClean

Site Manager: M. HART

Signature: John Hart

EnviroClean-Midwest, Inc.

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(614) 433-0886 (Fax)

Notes:



Record of Activities

1330 - Weather conditions are poor. Moderate, steady rain.
Slopes steep, soft and clay is very slippery.

Called Valley National Lines. They rebuffed pick up
on Tuesday. I told them we may not be here
due to rain but I'd call them when we get back
on-site. So they could come by. Cylinders loaded in tool
truck.

Crew meets @ 1330. Caught a traffic accident on highway. Took
detour.

1350 - Still raining - harder now.

1400 - Spoke with Jeff Stegman. Decided to put concrete sweep
back in pit and close it off. Cannot be broken w/
jackhammer. We will clean out sweep up.

1410 - Shut down due to rain. Too wet to work. Will
work Wednesday if stops raining tonight, but
Significant Events

Unlikely.

1415 - Turned in daily work permit. Let Dan know
we were leaving for the day.

1420 - Called Valley. Said can - see Randy Kell at home
Sunday if need truck Monday.

HSTAFFISGBETSMISCDFR

Talked w/ Rick Clegg. Rescheduled loader and dump for
Tues. Afternoon.

Off-site @ 2:30 pm.

Crew 7:30-2:30 + P 2:30
3 hr. truck time

DAILY FIELD REPORT

Date: 11/25/96

Project #: 109-72

Project: DAN FIRE POND
REMEDIALION

EnviroClean

Site Manager: MTH/AT

Signature: MTH/AT

EnviroClean-Midwest, Inc.

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(614) 433-0886 (Fax)



Notes:

Copied field notes through week ending
11/22/96 and left in Dennis Stanley's
mail box.

Record of Activities

- 1030 - Called Dan Nieman. Expected storms this afternoon and
Tuesday + Wednesday.
- 1115 - Met w/ in-situ rifle contractor offering equipment and
backfill. I asked for a written proposal for ~1000 T
backfill.
- 1130 - Received daily work permit from Dan Murphy.
Talked w/ Jeff Stegman. He's going to get final
word on change order today also he mailed a
memo outlining reasons for change in tonnage of
bulldozer required.
- 1135 - Called Steve Lester, not in office today. Called Extra
Office and left message for him to call me.
- 1145 - Talked to Dan Murphy. Said he would get 400 T of dirt from
Stevie's location to Jeff Stegman. Mailed "Save the Right"
fax # off fire tube mobil.
- 1200 - Raining, tree working. Alan left home (with him, I must say)
in-sited yet.

Significant Events

1145 - A south wall of pit. now has ~ 30 trees + bent so far
Tree slope with trees is buried into soil ~ 1 foot. will
have to be excavated to remove them.

1230 - Raining harder and steadily.

1/38

HSTAFFSGBETSUMISCIOFR

Bench - 7^{ft} - 10^{ft} max +
slope - 7^{ft} - 12^{ft} max =
Dirt - 7^{ft} - max =

page 1 of 2

DAILY FIELD REPORT

Date: 12-2-96

Project #: 109-72

Project: Dow Free Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart.

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

0700. Barney and Chuck D. on-site. Charged fluids, maintains equipment. E.C. kiosk off-site. Rental Komatsu on-site. Also, dump truck and track loader on-site. Site very wet and muddy. Working conditions not



Record of Activities

very favorable due to saturated site conditions

0730. M. Hart called Dan Murphy. Checked to make sure work permit issued to B. Binner. Dan indicated crew was on-site, issued a permit to binner and they are currently working.

1335. M. Hart on-site crew already taken lunch. Site conditions not real good for working in the sand.

1345 Called Valley National Gas. Picked up O2 and acetylene tanks this morning but didn't leave change. Said they will mail change to our office.

1346. Called Rick. asked him to call Samsel and make sure billin starts Wednesday, not today.

Called Randy Kelly @ landfill. Hopingful to run trucks

1520. Valley National Gas - picked up O2 and acetylene tanks

1645. Called to order fuel for tomorrow. No answer.

Significant Events

Aprox 2½ miles away 6" soil removed and stockpiled.

RCO - off site

1/93

HSTAFF SGBETS MISCDR

* All fence material that was stockpiled for Dow has been taken off the uninc area over holiday weekend.

10 hrs. C. Dally

10 hrs. B. Binner

7.5 hrs. M. Hart

page 1 of 1

DAILY FIELD REPORT

Date: 12-3-96

Project #: 109-72

Project: Don Fire Pond
Remediation

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes:

0700 - On-site. Myra, Chuck & me Barron Brum. Obtained daily work permit from Don Murphy. Steve Holton called. Does not have time to finish what Jeff Stegman asked for. Asked me to get with Jeff and get him what he needs. Talk to Jeff @ 830. Told him I will get more them based on Record of Activities new calculation.

0730 - Called for 3 dump trucks. Lorry not in but left instructions for 3 trucks. will call.

0900 - Called Chuck Hartford. Said he would double check my calculations and I sent him a fax with pond dimensions and draft memo. Don Murphy said I could use DOTS fax machine. Fax sent @ 940 am.

0930 - Called for Fuel delivery. May not be able to make it until tomorrow a.m.

1000 - Spoke w/ Duane and Jeff Stegman. I asked them for a signed change order. I didn't He wasn't aware he has to sign anything. I told him there was a signature page. He'd try to find it and sign it. He gave me verbal authorization to begin backfilling using said areas. Duane said to use about half of the site.

1025 First dump truck on-site today. off c 1045.

Significant Events

8P on-site & fuel up. Topped off tank & equipment. 1-scheduled delivery for Thursday am.

1115 - Called Wendy Vally. will turn 4 trucks - 5 trucks around today. Have 2 more in addition to the 3 on the way - will keep turning them around till 3:00 pm.

DAILY FIELD REPORT

Date: 12-3-96

Project #: 109-72

Project: Dow Five Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. HART

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

- 1220 - Myra + Barney to lunch. Chuck stayed and loaded one dump truck w/ soil.
1230 - Chuck to lunch.
1345 - Truck in, getting loaded.



Record of Activities

- * Majority of soil from sidewalls is down and stockpiled. Having more difficulty getting to of sidewalls because soft, slippery wet clay.
- 1400 Two more dump trucks on-site. Spoke w/ Dow employee & guard house to let them know trucks on-site needing load fill papers signed. Dan Murphy in meeting. Didn't know if anyone else in company can sign, but would call Dan as soon as loaded trucks pulled into gate.
- 1425 Called Chris. Gave him hotel fax # to send draft memo and calculations. Talked w/ Rick Olson. Said he will call & let us know if a power operator - is coming up tonight or tomorrow am.
- Called Randy Leekly. Ordered truck to start tomorrow @ 0730 am. After 10-12 trucks until call w/ info about how many more there are.

Significant Events

- 1630 - Jeff Stegeman handed re the signed change order in backfilling
1730 - Off-site
from today 7-5th Baum, Chuck, Myra

1/93

1STAFFSGBETSUMISCDFR

* Soil off today = 167.28 TONS
D-21 3rd/to-date = 264.82 TONS

page 2 of 2

DAILY FIELD REPORT

Date: 12-4-96

Project #: 109-72

Project: Fire Pond eDow
Remediation

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

0700 - B. Brown, C. Duddy and M. Hart on-site. Work permit obtained by Dan Murphy of Dow.
F. Kiser also on-site today.
Today's task; break up concrete - try again -; load trucks w/ soil for disposal;
begin backfilling pond w/ available material stockpiled on-site.



Record of Activities

0715 - First 2 trucks on-site - B&B Trucking. During truck loading activities, transporting soil from stockpile to pond for backfill.

0915 - Dow has asked us specifically NOT to use the soil stockpiled in certain areas of the site! They said we can use the remaining soil. However, I informed both Duane and Dennis that this soil is very wet and cannot be used until it dries out. Therefore, I told Duane that we will have to start trucking it in from off-site. He said okay.
I called Randy Kelly and B&B Trucking. Asked him how many trucks - he can get 3-4; ~~within~~ 10 minutes. Apart, continuous. Getting backfill from a very local source.

1105 - Scheduled 100 meeting with Dow to present reasons for changes in quantities

Significant Events

met Randy Kelly on-site. He will bring in a load of 6" rock for cross over improvement and send more trucks for the pond and begin sending trucks w/ backfill.

DAILY FIELD REPORT

Date: 12-4-96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes:

1300. Meeting w/ Duane, Jeff Stegman and Dennis Stanley. Told them about actual quantities vs. quantities obtained from their engineering drawings. Told them that we must supply a change order for the increase in field dimensions of the pond. They understood why change order is needed. They want to go back to their board Record of Activities

only one time, so they want change in all quantities at once. They decided they will measure the pond independently using a transit and tape, and we should use the measurements they give us. I said we'll issue a change order as soon as we got those measurements.

1400 - Called for a second load of rock for road improvement. Dow is currently taking measurements of the pond.

Backfill material coming in from off-site consists of sand, pretty clean, brown-reddish broken. 11-30 tons / load. 45 minute round trip.

Decom dump truck. Finish with it. Call Rick Cline to have it taken offsite. Left message on his voice mail.

Significant Events

300 - called Rick. Take dump off site. Rusty to shop tomorrow. w/ pressure washer need.

530 - Dow, Shut down equipment, job site.

1/83

1STAFF 2STAFF 3STAFF 4STAFF

0600 - off site.

Hiring - B. Brown 10
M. Hart 10
C. Dabbs 10
L. Kim 10
 $10 + 6 total = 16$

CHK 2 OF 2

DAILY FIELD REPORT

Date: 12-5-96

Project #: 109-72

Project: DOW FIRE POND
REMEDIALION

EnviroClean

Site Manager: M. HART

Signature: M. Hart

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes:

0700 - Barney Broad, Chuck Dudley, M. Hart on-site. Called cloudy. Should get some rain this afternoon.

0825 - Called Green Valley Landfill. Randy will have 5-6 trucks in there per day to meet schedule.

Record of Activities

Called Nick to prepare Purchase Order for BWC Trucking strategy quantities delivered per day.

0945 - Continuing backfilling, cutting south berm. Asked Dennis to send someone to confirm how much we can cut off berm. He said maximize, as long as sheet flow into drainage ditch occurs.

1000 - Called and scheduled fuel for to check on fuel. Should have been here this morning.

1045 - BP Fuel on-site to fuel trucks + reserve tank.

1146 - Jeff Stegman dropped off final numbers to use for backfill calculations.

Significant Events

1000 - Barley at lunch. Haul road getting real soft - difficult for trucks to unload. Having to dump load further away from pond. Ordered 2 loads of the large 16" rock for base road. Left message at his 2 phone numbers.

1/93 STAFF SGT BETSY MISCHOLFR

Talked w/ Dennis. ~~told him~~ recommended that Dow put up a silt fence if gravel not being placed.

DAILY FIELD REPORT

Date: 12-5-96

Project #: 109-72

Project: Day Fire Pond
Remediation

EnviroClean

Site Manager: MHart

Signature: JMH

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

1630 Called BWC Trucking. Trucks are coming in so heavy (30-31 tons) > 80,000 lbs that they're sinking in our gravel haul road. Asked him to lighten up the loads a bit. He said okay, but bid based on 30 ton loads. I told him most trucks coming in over 30 tons.

1715 - Last of the trucks in today arrived. Raining steadily

1640 - last truck stuck on the haul road. Too wet and trucks too heavy - called Candy & left message for her to call. Need to cancel trucks. She called back. I canceled for tomorrow until I call back.

Total Bagfill purchased today = 144.82 TONS

TOTAL Bagfill to Date = 1768.07 TONS

Off-site @

Significant Events

Rain (

P 2 of 2

DAILY FIELD REPORT

Date: 12-6 - 96

Project #: 109-72

Project: DEW FIRE POND
REMEDIATION

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

0730: B. Brown, M. Hart, C. Dudley on-site. Rain has stopped, clear skies. Called to get one load of rock for haul road and trucks w/ backfill started this morning.



Record of Activities

1100 - First load of Backfill in. Had to get #2 stone on haul road before we began backfilling. Rain made roads wet and soft. Ordered 3 loads of #2 stone. Stone took ~ 2 hours to get hauled down anyway.

1500 - Trucks have been in and out all day. Dennis Stanley asked about final #'s for tonnage to give to the board. I referred him to my memo dated Nov 20 1996 and our Chay Order #1 and the schedule of values. I told him at this point there will be no significant (> 3000 T or more) change in amount of Backfill purchased. Today, after backfilling ~ 2000 TMS, sand appears to be ~ 1/2 full. Note that also no berm material used to fill, not available for

1500 Called Randy Kelley. Confirmed schedule for Monday. 5 truck hauling all day - backfill. Start at 7:30 am.

Significant Events

Called Dick - Need Excavator by 200 Tuesday 12/10/96
Last truck at 8:33A. Finish pushing sand into pile and
sealing site.

1/83 Total Backfill today: 672.52 T
Total to Date = 2440.59 T.

INSTAFF SGBETS MISCDFR

Offsite @

DAILY FIELD REPORT

Date: 12/9/96

Project #: 109-72

Project: Dark Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M HART

Signature: [Signature]

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: ⁰⁷⁰⁰
On-site. B. Brown and Jeff Carpenter. B. Brown
Foreman.



Removed last 6" of soil from top of sideslopes,
stockpiled on-site. Trucks bringing in fill

Record of Activities

Material all day.

Off site @ 1800

B P brought diesel fuel 118 gal at [REDACTED]

Total Bulkfuel Delivered Today = 1288.06

Total Bulkfuel To Date =

Time 1 hr.

Significant Events

DAILY FIELD REPORT

Date: 12/10/96

Project #: 109-72

Project: Dow Fine Pond

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes:

0700. B. Brown on-site. Trucks on-site to take soil to landfill for disposal. Also, trucks bringing in backfill.

Record of Activities

1000 Rusty Kiser on-site. No support

1010 - Myra Hart on-site.

Spoke with Bill Lang. Explained what Dow needed to go to Vicino Superiors for final costs. Also said to tell Dow that the final report will be to them by Jan 15

Thru on site @ 1220

Handed in 1253.74 tons - 49 trucks

Amount of - in hand of for drivers? 125.81 tons

5-frac 18.00

Rusty & Brown had 1hr lunch.

Significant Events

Rusty took out 2 new posts of existing fence while taking out old gear line with torch.

Powers picked up PC200 at 14:00 tracks clean, glass good.

DAILY FIELD REPORT

Date: 12-11-96

Project #: 109.72

Project: Down Fire Pond
Demolition

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes: 0700 on site B. Brown, ~~Boaty~~ ^{W. Beaphar} ~~was~~ ^{was} doing
Trucks bringing in backfill (sand)

Record of Activities

Total backfill for Today = 56 trucks at 1437.90 tons

1 hour lunch for both of us.

All site 18:00

Had BP returned tank + machinery
138 gal at ~~1000~~

Significant Events

Rained last night site OK

DAILY FIELD REPORT

Date: 12-12-96

Project #: 109-72 Project: Dow Fire Pond

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes: 0700 on site B. Brown

Rained all night site wet

Rusty left site 08:00

Record of Activities

Had 2 loads of #2 sand brought in for different road
for trucks by building with salt

Had 2 loads of 57 sand brought in for road

Waited for stone to make road then brought sand
in

Told Jeff Carpenter to come to site 09:00

On Site 12:00 No Lunch

Total truck fill for today is 15 trucks at 625.96 tons

Rained on & off all day. Off site 17:30

Significant Events

DAILY FIELD REPORT

Date: 12-13-96

Project #: 109.72

Project: Dow Fire Pond
Remediation

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes: 07:00 on Site B. Brown, Jeff Carpenter
Handling in backfill

Record of Activities

BP filled up machinery & tank 84 gal. at ~~101.72~~

Total backfill for today 101.72 Tons = 23 trucks

Off site 12:00

Sawin picked up Volvo truck 11:30

Significant Events

DAILY FIELD REPORT

Date: 12-16-96

Project #: 109.72 Project: Dow Fire Pond

Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: 0700 on site B.Brown & Jeff Carpenter



Record of Activities

Pushed Backfill in holes

6 14 trucks dumped in 1584.73 tons of backfill today

Benny had lunch then Jeff did not

Off site 17:30

To do paperwork for Benny 17:30 - 18:00

Rained all day.

Significant Events

DAILY FIELD REPORT

Date: 12-17-96

Project #: 109.72 Project: Down Twp Pond

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: 07:00 On Site B. Brown +
Jeff Carpenter



Record of Activities

Poured backfill today

617 truck loads in 1669.77 tons of backfill today.

BP delivered diesel for tank + equipment
77 gals.

Barney + Jeff had 1hr. lunch today

Hole is close to being full

Off Site 17:30

Barney did paperwork from 17:30 - 18:00

Rained in Am

Significant Events

DAILY FIELD REPORT

Date: 12-18-96

Project #: 109.72 Project: Down Tifford

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes: 07:00 On Site Jeff Carpenter
B. Brown

Record of Activities

Had 4 trucks bring in 109.40 tons of Fill Sand.
A.M.

Put 2 loads of #2 in pit called in 2 more to fill
^(60.74 tons)

Talked to Dennis Stanley to get ok to start
bringing in Topsoil he said yes go ahead and start

Total Topsoil 9 trucks at 256.65 tons

Barney 1 hr. trucks left none.

Hole filled and graded started to topsoil

Off site 17:30

Barney 5 hr. paperwork.

Significant Events

DAILY FIELD REPORT

Date: 12-19-96

Project #: 109,72

Project: Dow Fire Pond
Remediation

EnviroClean

Site Manager: Brunoey Brown Signature: Brunoey Brown

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes: 07:00 On Site B.Brown, Jeff Carpenter

Record of Activities

Total Topsoil In today 11 trucks at 257.24 tons

Total Topsoil In job 320 trucks at 543.89 tons

Straw was delivered 9:00 am 100 bales

Did not put straw down Don Murphy said they are
going to put seed down on Monday 12-23-96

Boener had 1hr lunch & Jeff didn't

Finished topsoil put up 5ft fence along ditch

Put Wildlife Refuge sign back up

Fingered fillers up pit with ≈ 2"

Left 40ft by 10ft pit next to ≈ 2" in south end
closed off pit

Don't ask Don Murphy if the job was satisfactory
with Dow. He said yes -

Told him I'll be there on 12/23/96 to pick up site trailer.

Jeff Carpenter off site 16:00

Significant Events Brunoey B. off site 17:00

Jeff Carpenter drove back to shop 16:00 - 19:00

Brunoey B. drove back to shop 17:00 - 20:00 + - 5th paperwork

APPENDIX E

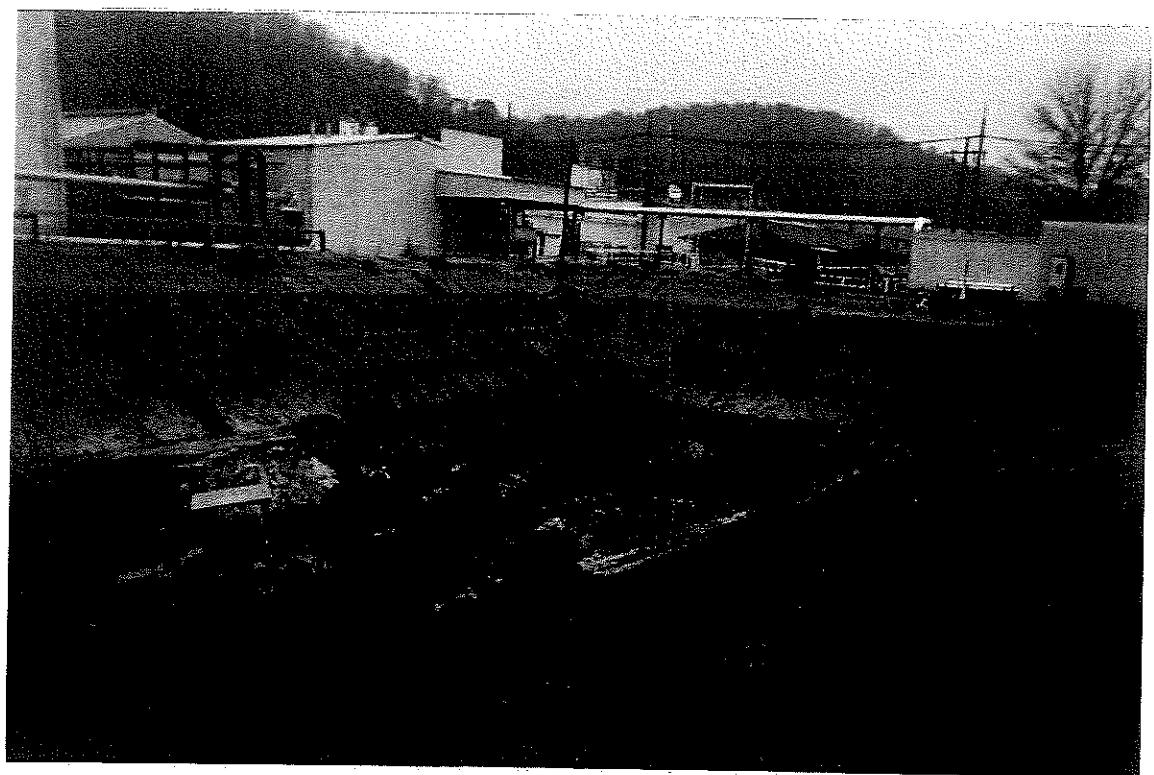
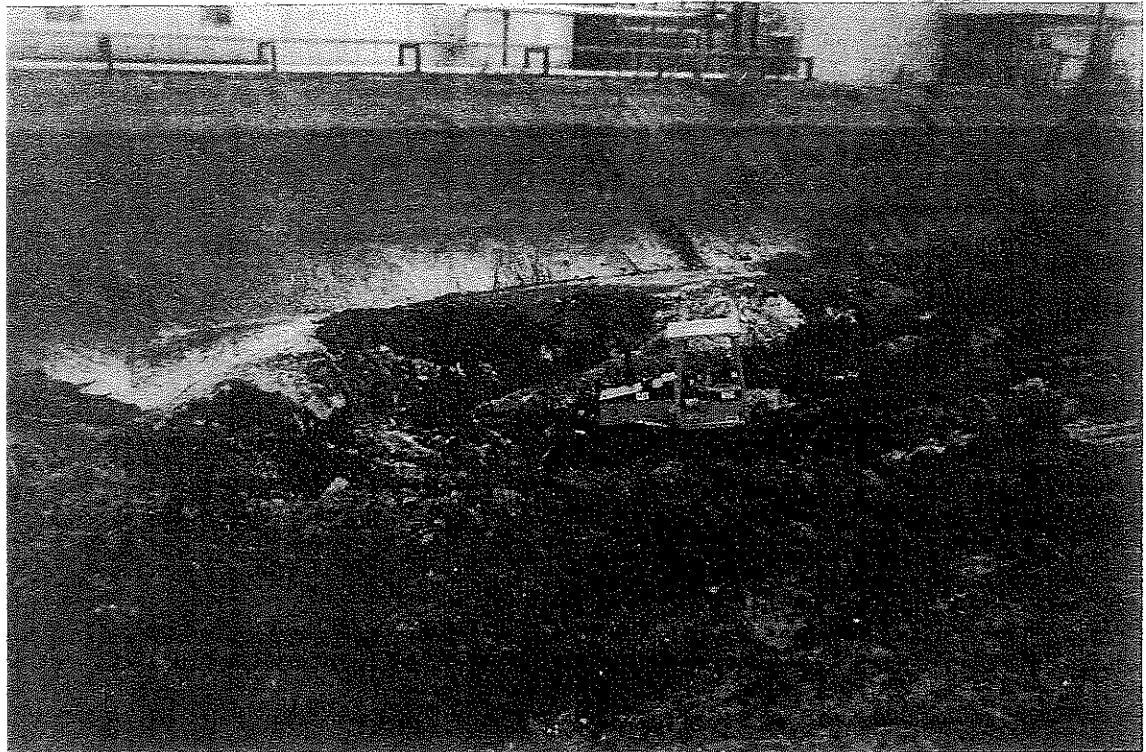
Photo Log of Construction Activities

Fence Removal



Sludge Solidification and Excavation







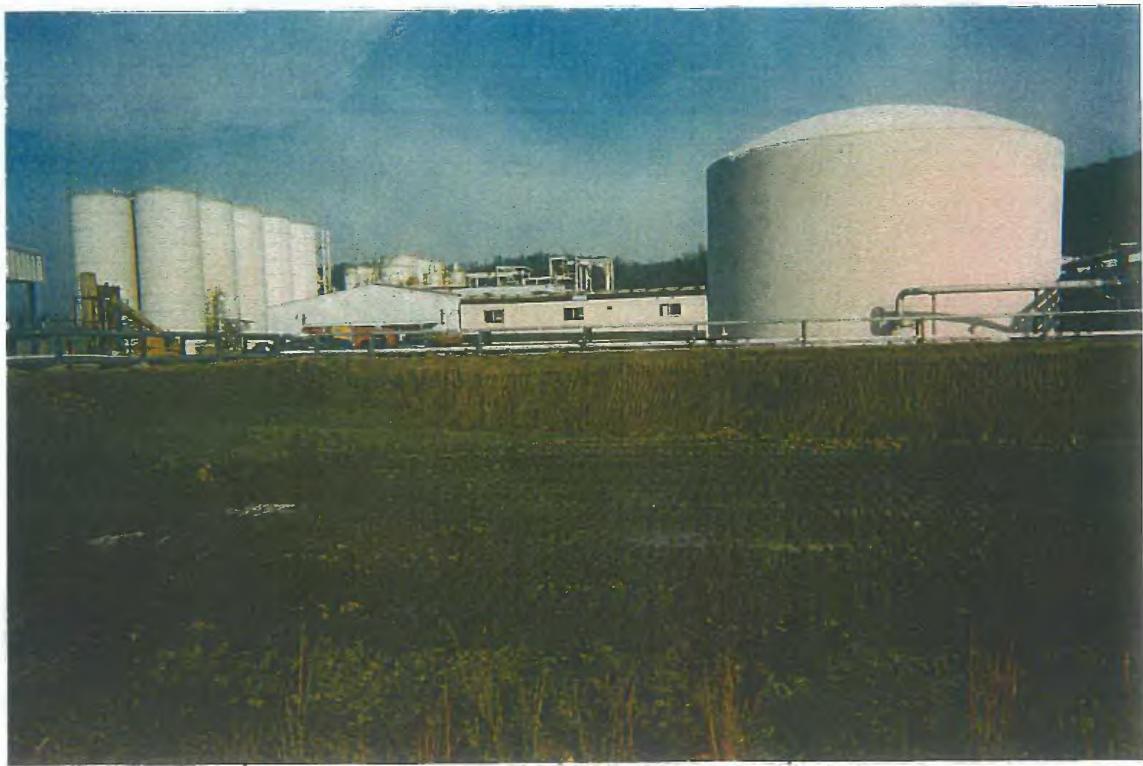


Liner Removal



Soil Removal







Backfilling Operation









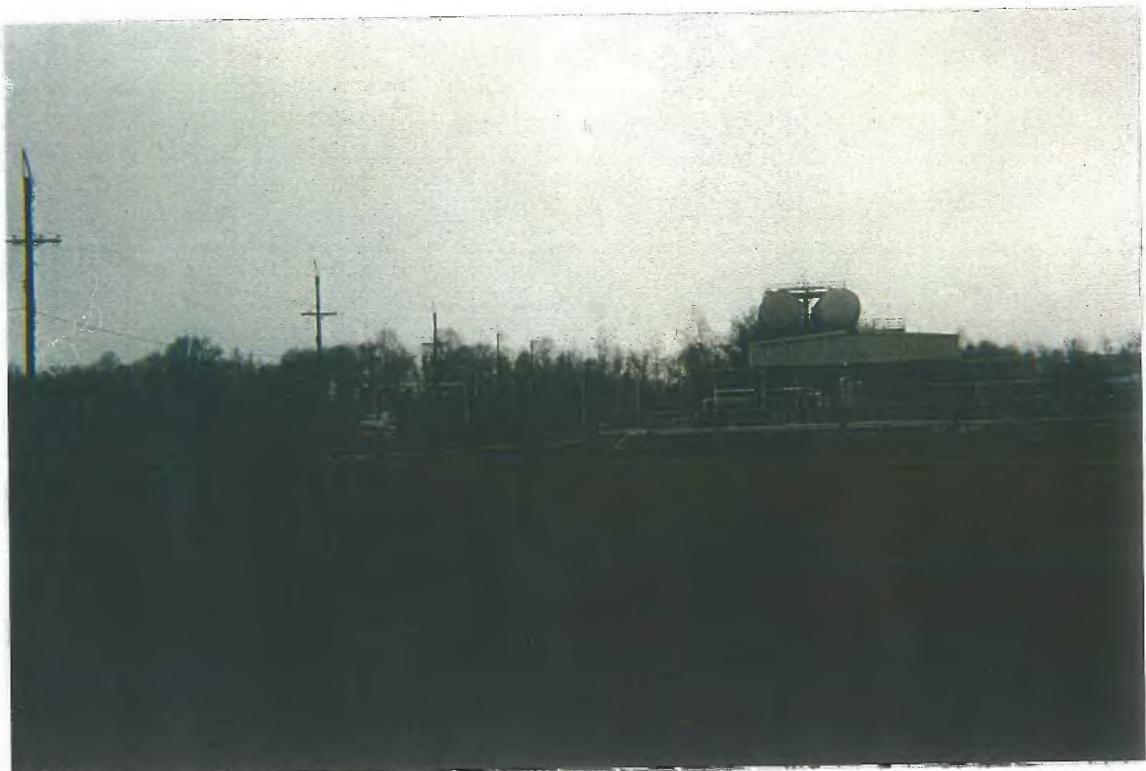
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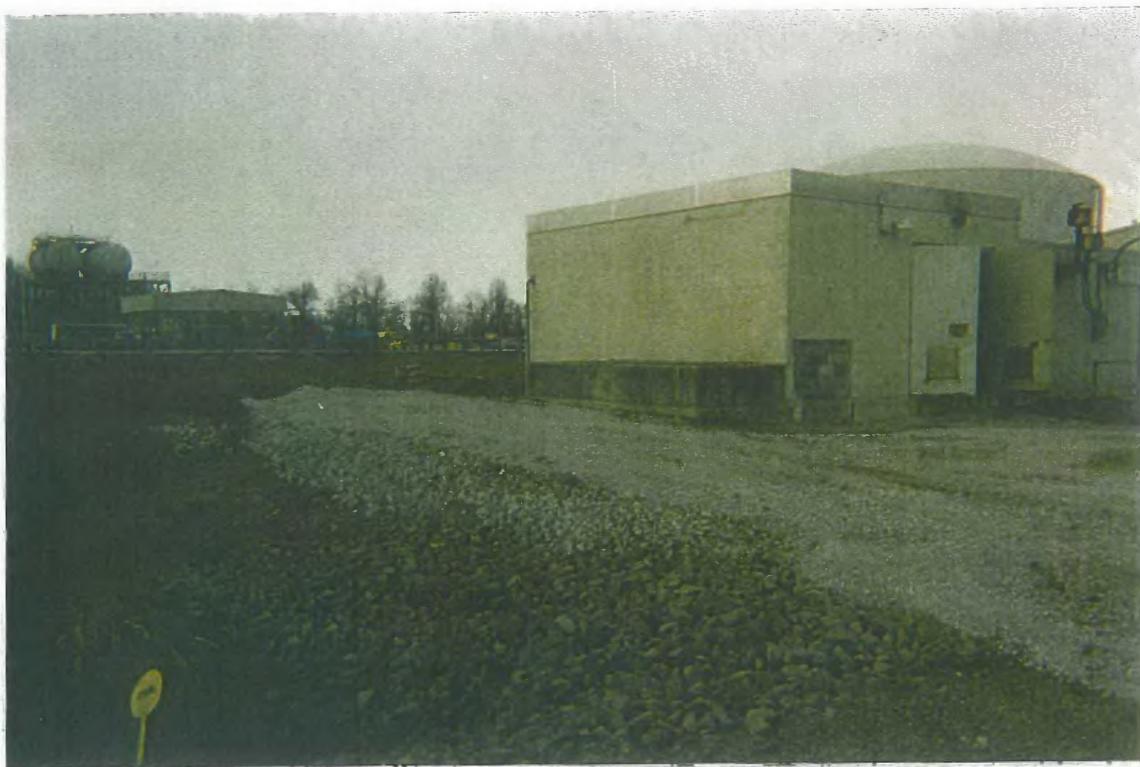


1970-01-01 1970-01-01

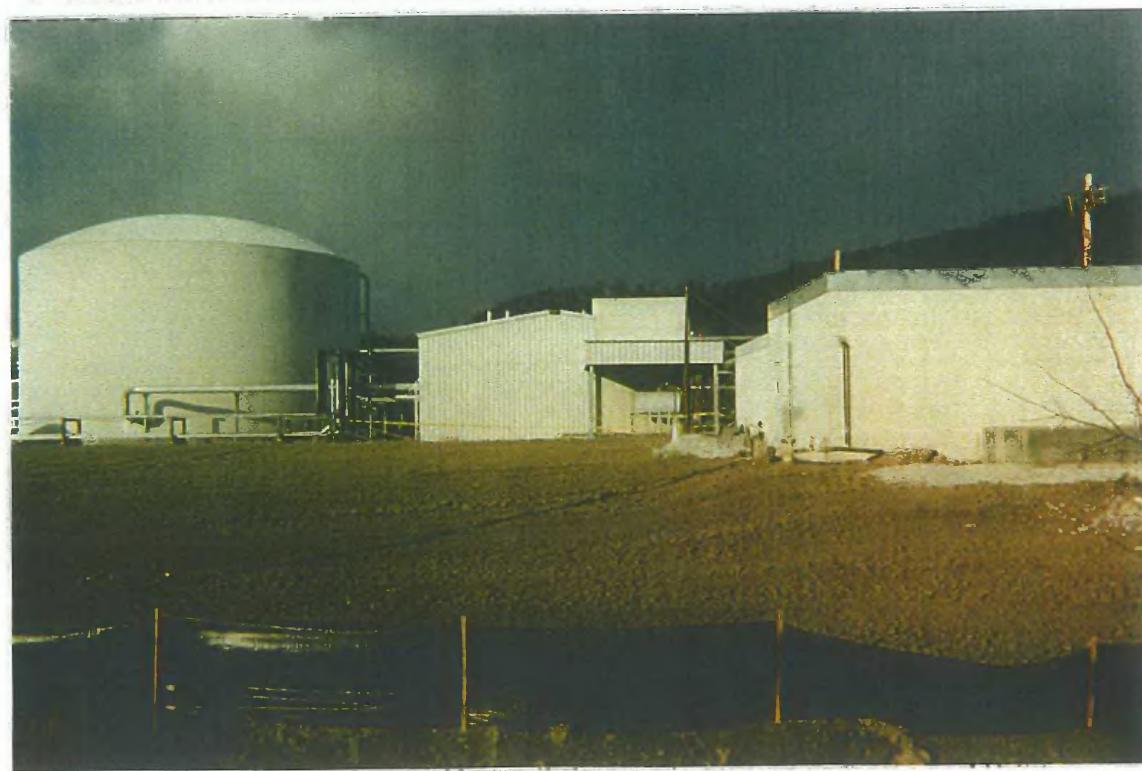




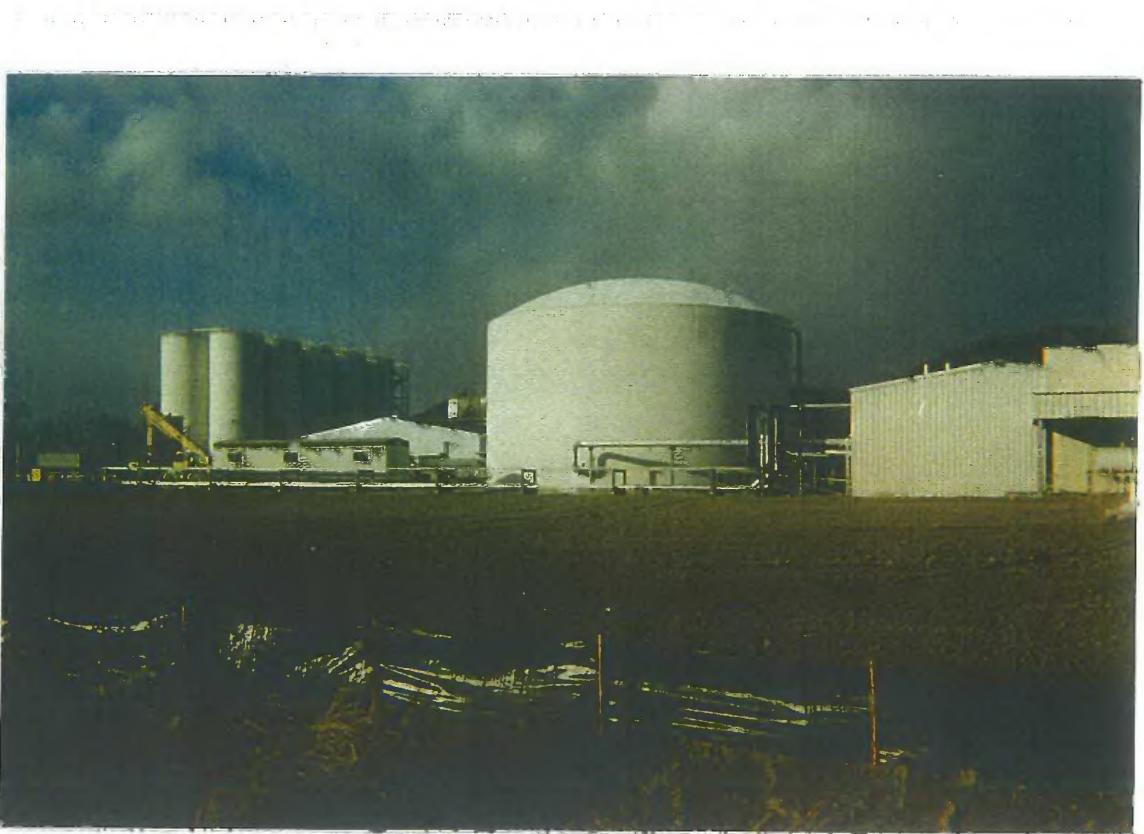


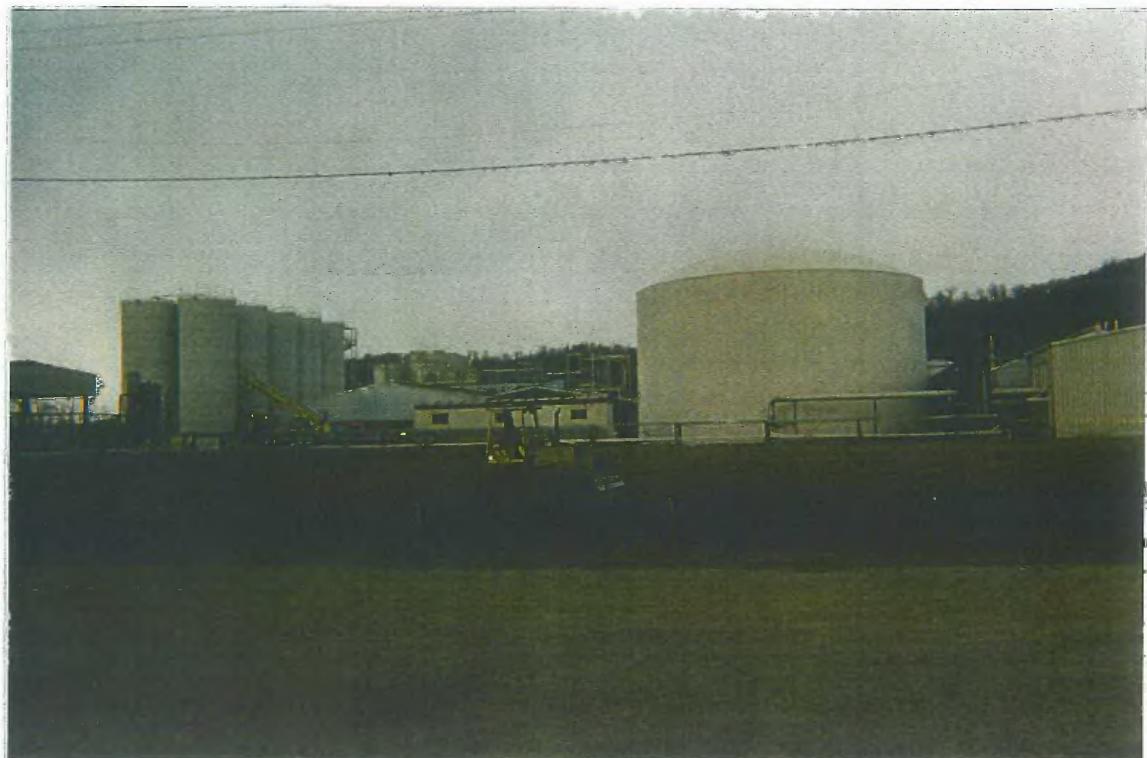


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2014-02-26 10:45:24 - 2014-02-26 10:45:24 - 2014-02-26 10:45:24 - 2014-02-26 10:45:24 -

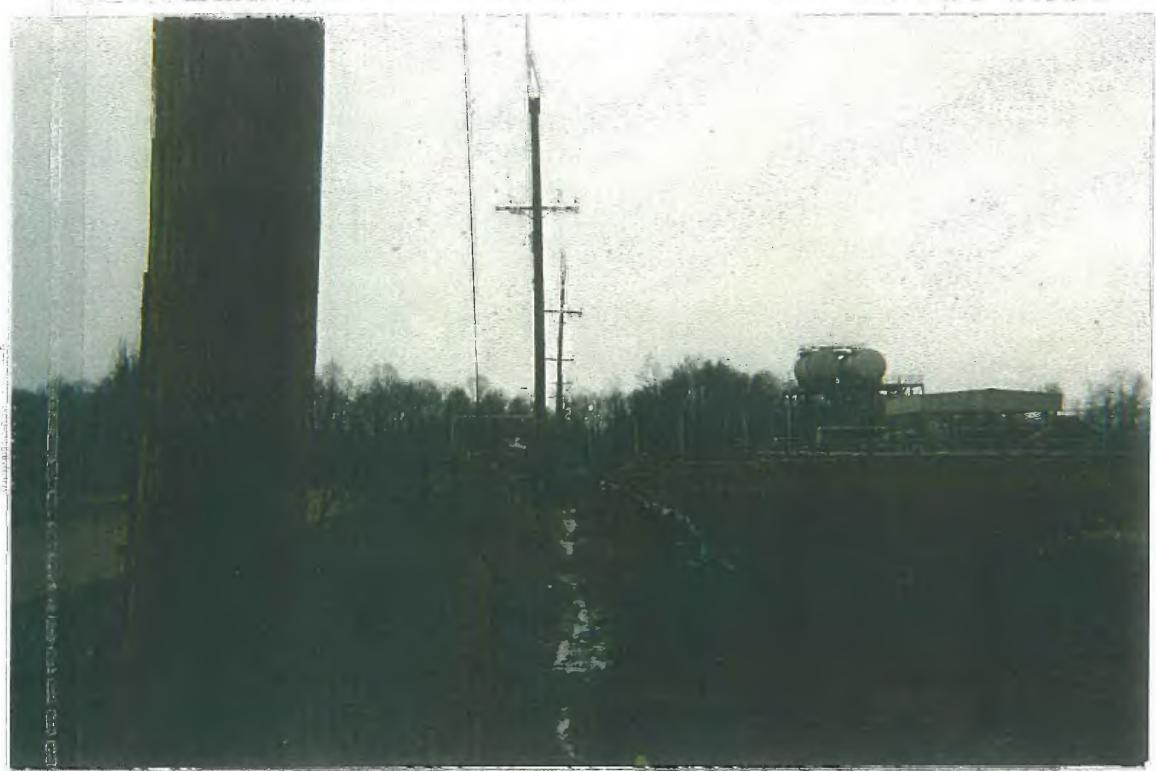




Re-routing Sewer Connection



Drainage Ditch-Construction Activities



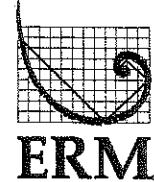
*Concrete Corner, Drainage Pad
Removal and Disposal*

**Environmental
Resources
Management, Inc.**

600A Prestige Park
Hurricane, WV 25526
(304) 757-8017
(304) 757-8190 (fax)

April 29, 1997

Mr. Dennis Stanley, CEA, PEA
Environmental Compliance Leader
The Dow Chemical Company
Hanging Rock Plant
925 Country Road 1A
Ironton, OH 45638



Project No: 78022.00.01

Re: Final Report--Fire Pond Closure
 Dow Chemical Company
 Hanging Rock Plant

Dear Mr. Stanley:

Please find enclosed three (3) copies of the Fire Pond Closure Report.

ERM sincerely appreciate this opportunity to be of service to Dow Chemical Company. If you have any questions regarding the report, please call me.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul L. Gebhard".

Paul L. Gebhard, P.G.
Senoir Project Geologist

Enclosures

355 East Campus View Blvd.
Suite 250
Columbus, Ohio 43235
Phone: (614) 848-4494
Fax: (614) 433-0886

February 12, 1997

Mr. Kenan Stevick
EH& S Manager
The Dow Chemical Company
925 County Road 1A
Ironton, Ohio 45638



File Number: 109-72

Subject: Resolution of Backfill Quantities

Dear Ken:

Thank you for the time to meet and the kind words regarding the quality of our people and performance in completing the Fire Pond Project. I must also say that I found the project debriefing to be quite valuable and hope that you will derive similar value from the process.

The purpose of this letter is to respond to Dow's request for EnviroClean-Midwest, Inc. (EnviroClean) to consider a reduction in price associated with the purchase of backfill material for the former Fire Pond. After review and consideration it is EnviroClean's position that the charges for backfill are appropriate and consistent with our proposal of May 17, 1996. The Proposal stated our assumptions, quantities and basis for handling additional material. Prior to awarding the project the quantities stated in our Schedule of Values or the method of estimating those quantities were not questioned.

During the meeting on February 6, 1997 we learned that questions were raised by Dow regarding the quantity of fill available from the berms surrounding the Fire Pond prior to the award. Dow also indicated that at least one other bidder was allowed to adjust their price to address an issue relating the amount of backfill available from the Fire Pond area. Unfortunately Dow did not communicate to EnviroClean any questions or concerns regarding our proposal or that any bidder(s) were given an opportunity to modify their proposal on the basis of new or clarified information.

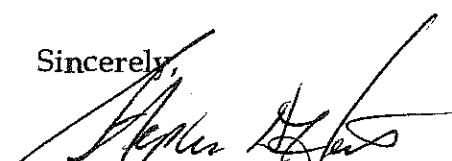
EnviroClean is not in a position to provide a refund nor do we feel a refund is appropriate given the facts discussed above. However, since

Mr. Kenan Stevick
File Number 109-72
February 12, 1997
Page 2

both parties have agreed this project was successful and Dow has indicated that it is very pleased with the quality of the work performed by EnviroClean we are prepared to make an offer to settle this to the benefit of both companies. In the interest of continuing to foster a long term relationship with Dow and to provide relief on the backfill matter, EnviroClean-Midwest, Inc. is prepared to offer Dow a 3.5% discount, up to \$ 40,000.00, on future work performed by EnviroClean-Midwest, Inc. We believe this offers Dow the opportunity to realize future savings and continue working with a firm which has proven it can provide Dow with high quality remediation services. Let me emphasize that EnviroClean-Midwest, Inc. is very appreciative of the work received from Dow and would like to continue working with Dow in the future.

If you have any questions or need additional information please feel free to give me a call at 614-848-4494.

Sincerely,



Stephen D. Heston
President & CEO

cc: Dennis Stanley, Dow
Bill Camp, ERM
Myra Hart, EnviroClean

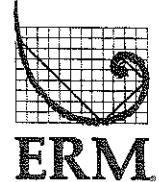


**Environmental
Resources
Management, Inc.**

600A Prestige Park
Hurricane, WV 25526
(304) 757-8017
(304) 757-8190 (fax)

February 10, 1997

Mr. Dennis Stanley, CEA, PEA
Environmental Compliance Leader
The Dow Chemical Company
Hanging Rock Plant
925 Country Road 1A
Ironton, OH 45638



Project No: 78022.00.01

Re: Draft of Final Report
 Fire Pond Closure

Dear Mr. Stanley:

Please find enclosed two copies of the **draft** Final Report for the Fire Pond Closure. Please contact me with your comments and questions. Appendices C and D have not been included.

ERM appreciates the opportunity to be of service to Dow Chemical Company. If you have any questions regarding this information, please call me at (304) 757-8017.

Sincerely,

A handwritten signature in black ink that reads "Paul L. Gebhard".

Paul L. Gebhard, P.G.
Project Manager

Enclosures

9.0

POND BACKFILLING, GRADING AND COVERING

Backfilling of the pond commenced on 9 December 1996 and was completed on 19 December 1996. The material used to construct the berms for the Pond was used as partial backfill for the Pond. Material was moved, placed and compacted with a D5 dozer and 953 track loader. The pond was backfilled and graded to match the grade surrounding the pond with a southeastern sheet flow. Additional fill material (primarily sand) was purchased from a local source and delivered by BWC Trucking, Inc. to backfill the Pond. 11,011.87 tons of fill material (based on vendor weight tickets) were purchased to complete the backfilling of the Pond.

After the backfill was placed, the surface of the pond area was covered with a 6 inch base of top soil with a straw cover. Dow plans to plant grass in the spring of 1997. This was a change from the original plan to cover the surface of the pond with a 6 inch base of #57 limestone. A silt fence was placed along the southeast side of the Pond area to temporarily minimize soil run-off into the drainage ditch. The silt fence will be removed after the area has been seeded in the spring.

I would include
why the change from
stone to grass in
this paragraph

8.0

CONFIRMATION OF ACCEPTABLE CLOSURE, BASED ON OHIO EPA RISK-BASED CLOSURE STANDARDS

There were no detections above the Method Detection Limit (MDL) for PPL VOC and SVOC compounds for any of the eight soil samples underlying the rubber liner. In addition, there were no detections above TCLP limits for VOC, SVOC, pesticides, herbicides and metals for the one soil sample for disposal characterization.

PG 1 indicates

2 samples for disposal charact.

A1>
PG 4 to
5

The analytical results for the eight soil samples were compared to the USEPA Region V, RCRA Data Quality Level Table Update 1 (Tables 3 and 4). With the exception of the constituents listed below, none of the constituents exceeded the Data Quality Levels (DQL). Three volatile constituents; vinyl chloride, 1,1-dichloroethene, and acrylonitrile were analyzed at detection limits above the DQL. Five semivolatile constituents; n-nitrosodimethylamine, bis-(2-chloroethyl) ether, dibenz(a,h) anthracene, benzo(a)pyrene and N-nitroso-di-n-propylamine were analyzed at detection limits above the DQL.

None of the detections were above USEPA Region V, RCRA Data Quality Level Table Update 1 risked-based values. Dow completed the closure as a "clean" closure.

Did The levels Meet
the OEPa New
Remediation levels for the
Voluntary program?

355 East Campus View Blvd.
Suite 250
Columbus, Ohio 43235
Phone: (614) 848-4494
Fax: (614) 433-0886

February 12, 1997

Mr. Kenan Stevick
EH& S Manager
The Dow Chemical Company
925 County Road 1A
Ironton, Ohio 45638



File Number: 109-72

Subject: Resolution of Backfill Quantities

Dear Ken:

Thank you for the time to meet and the kind words regarding the quality of our people and performance in completing the Fire Pond Project. I must also say that I found the project debriefing to be quite valuable and hope that you will derive similar value from the process.

The purpose of this letter is to respond to Dow's request for EnviroClean-Midwest, Inc. (EnviroClean) to consider a reduction in price associated with the purchase of backfill material for the former Fire Pond. After review and consideration it is EnviroClean's position that the charges for backfill are appropriate and consistent with our proposal of May 17, 1996. The Proposal stated our assumptions, quantities and basis for handling additional material. Prior to awarding the project the quantities stated in our Schedule of Values or the method of estimating those quantities were not questioned.

During the meeting on February 6, 1997 we learned that questions were raised by Dow regarding the quantity of fill available from the berms surrounding the Fire Pond prior to the award. Dow also indicated that at least one other bidder was allowed to adjust their price to address an issue relating the amount of backfill available from the Fire Pond area. Unfortunately Dow did not communicate to EnviroClean any questions or concerns regarding our proposal or that any bidder(s) were given an opportunity to modify their proposal on the basis of new or clarified information.

EnviroClean is not in a position to provide a refund nor do we feel a refund is appropriate given the facts discussed above. However, since

Mr. Kenan Stevick
File Number 109-72
February 12, 1997
Page 2

both parties have agreed this project was successful and Dow has indicated that it is very pleased with the quality of the work performed by EnviroClean we are prepared to make an offer to settle this to the benefit of both companies. In the interest of continuing to foster a long term relationship with Dow and to provide relief on the backfill matter, EnviroClean-Midwest, Inc. is prepared to offer Dow a 3.5% discount, up to \$ 40,000.00, on future work performed by EnviroClean-Midwest, Inc. We believe this offers Dow the opportunity to realize future savings and continue working with a firm which has proven it can provide Dow with high quality remediation services. Let me emphasize that EnviroClean-Midwest, Inc. is very appreciative of the work received from Dow and would like to continue working with Dow in the future.



If you have any questions or need additional information please feel free to give me a call at 614-848-4494.

Sincerely,



Stephen D. Heston

President & CEO

cc: Dennis Stanley, Dow

Bill Camp, ERM

Myra Hart, EnviroClean

December 12, 1996

Mr. Dennis Stanley, CEA, PEA
Environmental Compliance Leader
The Dow Chemical Company
Hanging Rock Plant
925 County Road 1A
Ironton, OH 45638

File Number: 109-72

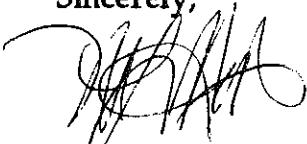
Subject: Change Order #2

Dear Mr. Stanley:

Attached is EnviroClean's Change Order #2 in response to the changes in field conditions and Dow's request for a change in the original scope of work. Also attached is a copy of the revised Schedule of Values for your convenience. These documents were faxed to your office on 12/12/96.

If you have any questions, please call me at (614) 848-4494.

Sincerely,



Myra L. Hart, C.P.G.
Sr. Project Manager

Attachments

CHANGE ORDER #2

December 12, 1996

This request for Change Order #2 is in response to changes in field conditions and changes to the originally proposed scope of work requested by Dow. An updated Schedule of Values is attached which summarizes the changes in cost as a result of both Change Order #1, dated November 20, 1996), and Change Order #2.

The requests for changes are as follows:

1. Items #5, 6, 7 and 8: The quantity of sludge solidified, excavated, transported and disposed is based on final landfill weight tickets. Reasons for the increase in quantity of sludge from the original estimated quantity is provided in our memo to Jeff Stegman dated 11/25/96. To summarize, the sludge was approximately 3.0 feet thick, 2.5 feet thicker than Dow originally estimated.
2. Items #10, 11 and 12: The quantity of soil excavated, transported and disposed is based on DOW weight tickets. The final quantity billed may vary, but only slightly, based on landfill weight tickets. Reasons for the increase in quantity of soil from the original estimated quantity is provided in a memo to Jeff Stegman dated 12/5/96. To summarize, original construction drawings provided by Dow did not show liner construction details. The liner actually stretched over the berms approximately 4 feet from the inside edges of the pond, resulting in an increased quantity of soil beneath the liner that had to be excavated, transported and disposed.
3. Item #14: The lump sum price for this task has been reduced as explained in our memo to Jeff Stegman dated 12/5/96.
4. Item #15: As explained in our 12/5/96 memo, the quantity of backfill material will change from the original estimated amount due to various, unknown factors. These factors include lower, in-place density of soil in berms (resulting in less material available from the berms for use as backfill), type of backfill purchased, moisture content and compactive nature of backfill, and

estimations and assumptions used in calculating material quantities based solely on initial site visits. In addition, as a result of changes in soil quantities discussed in #2 above, the additional soil removed at the top of the berms and disposed with the liner was no longer available to use as backfill. To date, approximately 5,500 tons of backfill has been purchased, and, based on visual inspection, we expect it will take an additional 3,000 to complete backfilling. Final quantities will be billed based on vendor weight tickets.

5. Item #13: Since the quantity of off-site material that has to be purchased to backfill the Fire Pond has increased, it will take additional time to transport and place the backfill than originally estimated for 4,050 tons. The increased costs for this item are necessary to cover EnviroClean's additional labor, equipment and material expenses.

6. Item #16: The quantity of gravel has been reduced since Dow has chosen to place topsoil over the backfill rather than gravel. Enough gravel will be purchased to backfill the concrete vault adjacent to the fire pump station. Final quantities will be based on vendor weight tickets.

7. Items #17 and 18: Dow has requested that topsoil be placed over the backfill material at the Fire Pond rather than 6 inches of gravel specified in our original proposal dated 05/17/96. In addition, erosion control measures will be required to minimize soil erosion prior to seeding. Final topsoil quantities will be based on vendor weight tickets.

EnviroClean will place approximately 4 inches of topsoil over the backfill material in place of the gravel. The estimated quantity of topsoil required to be purchased off-site and transported to the site is approximately 540 tons. This estimate is based on a four inch thick layer of soil over approximately 183 by 122 square feet. Topsoil will be compacted by heavy equipment during fill placement. No additional compaction effort will be required.

EnviroClean will not be responsible for settlement of backfill or maintenance of the remediated Fire Pond area since controlled compaction of backfill was not required.

Once the topsoil has been placed, a layer of straw will be spread out over the topsoil to minimize soil erosion until Dow can seed the area in early Spring,

1997. In addition, 230 feet of silt fence will be installed along the drainage ditch south of the Fire Pond area to control sedimentation in the drainage ditch.

8. Item #20: The costs for below liner sampling and analysis has increased for the following reasons:

The original scope of work assumed that soil sampling beneath the liner could be accomplished two weeks prior to sludge removal. Dow contacted us when the pond was dewatered. On November 6, 1996, ERM/EnviroClean went to the site and collected the sidewall samples, however, the pond had not been completely dewatered and the actual thickness and consistency of the sludge precluded any sampling beneath the liner at that time.

On November 15, 1996, a second attempt was made to collect a sample from beneath the liner. Although Dow had dewatered the Fire Pond to the extent possible, the consistency of the sludge was still too runny to facilitate representative soil sample collection.

On November 20, 1996, after sludge solidification, soil samples from beneath the liner were obtained. Analytical results were required before backfilling could begin, which was scheduled to take place within one week of the time of sample collection. To avoid schedule delays, laboratory analyses were conducted on an accelerated schedule, resulting in a 50% increase in analytical costs.

9. Item #2: Costs for de-watering the Fire Pond have been eliminated since Dow performed this work directly.

Mr. Dennis Stanley, CEA, PEA
The Dow Chemical Company
12/12/96

Please note that EnviroClean will be ready to purchase topsoil and straw the week of Monday, December 16, 1996. We will not proceed without your prior authorization.

For The Dow Chemical Company:

Approved

Name

Title

Date

For ERM EnviroClean-Midwest, Inc.:

Accepted

Name

Title

Date

Dow Fire Pond Remediation
Schedule of Values
Updated: 12/12/96

Item	Unit	May 17, 1996 Proposal			Change Order #1 (11/20/96)			Change Order #2 (12/12/96)		
		# of Units	Cost/Unit	Extension	# of Units	Cost/Unit	Extension	# of Units	Cost/Unit	Extension
1 Construction Mobilization	LS	1	\$ 5,200.00	\$ 5,200.00	1	\$ 5,200.00	\$ 5,200.00	1	\$ 5,200.00	\$ 5,200.00
2 Fence Removal	LF	1150	\$ 2.00	\$ 2,300.00	1150	\$ 2.00	\$ 2,300.00	1150	\$ 2.00	\$ 2,300.00
3 De-Water Lagoon	LS	1	\$ 6,200.00	\$ 6,200.00	1	\$ 6,200.00	\$ 6,200.00	0	\$ -	\$ -
4 Cross Over Improvement	LS	1	\$ 2,300.00	\$ 2,300.00	1	\$ 2,300.00	\$ 2,300.00	1	\$ 2,300.00	\$ 2,300.00
5 Sludge Solidification	Ton	80	\$ 31.30	\$ 2,504.00	80	\$ 31.30	\$ 2,504.00	722.39	\$ 31.30	\$ 22,610.81
6 Sludge Excavation	Ton	80	\$ 81.00	\$ 6,480.00	80	\$ 81.00	\$ 6,480.00	722.39	\$ 81.00	\$ 58,513.59
7 Sludge Transportation	Ton	80	\$ 6.13	\$ 490.40	80	\$ 6.13	\$ 490.40	722.39	\$ 6.13	\$ 4,428.25
8 Sludge Disposal	Ton	80	\$ 30.00	\$ 2,400.00	80	\$ 30.00	\$ 2,400.00	722.39	\$ 30.00	\$ 21,671.70
9 Liner Removal	LS	1	\$ 7,500.00	\$ 7,500.00	1	\$ 7,500.00	\$ 7,500.00	1	\$ 7,500.00	\$ 7,500.00
10 Soil Excavation	Ton	420	\$ 21.00	\$ 8,820.00	420	\$ 21.00	\$ 8,820.00	811	\$ 21.00	\$ 17,031.00
11 Soil Transportation	Ton	420	\$ 6.13	\$ 2,574.60	420	\$ 6.13	\$ 2,574.60	811	\$ 6.13	\$ 4,871.43
12 Soil Disposal	Ton	420	\$ 30.00	\$ 12,600.00	420	\$ 30.00	\$ 12,600.00	811	\$ 30.00	\$ 24,330.00
13 Backfill & Compaction	LS	1	\$ 10,000.00	\$ 10,000.00	1	\$ 10,000.00	\$ 10,000.00	1	\$ 25,000.00	\$ 25,000.00
14 Backfill Relocation	LS									
15 Backfill Material	Ton	4050	\$ 4.14	\$ 16,767.00	500	\$ 6.16	\$ 3,080.00	8500	\$ 6.16	\$ 52,360.00
16 Gravel	Ton	400	\$ 11.84	\$ 4,736.00	400	\$ 11.84	\$ 4,736.00	60	\$ 11.84	\$ 710.40
17 Topsoil	Ton							540	\$ 7.20	\$ 3,888.00
18 Erosion Control	LS							1	\$ 1,760.00	\$ 1,760.00
19 Disposal Characterization	LS	1	\$ 2,040.00	\$ 2,040.00	1	\$ 2,040.00	\$ 2,040.00	1	\$ 2,040.00	\$ 2,040.00
20 Below Liner Sampling & Analysis	LS	1	\$ 5,680.00	\$ 5,680.00	1	\$ 5,680.00	\$ 5,680.00	1	\$ 7,791.00	\$ 7,791.00
21 Final Report & Project Management	LS	1	\$ 5,550.00	\$ 5,550.00	1	\$ 5,550.00	\$ 5,550.00	1	\$ 5,550.00	\$ 5,550.00
Total				\$ 104,142.00				\$ 107,155.00		\$ 277,188.18

Items In Bold and Italics indicate changes from previous estimates.

NOTE: All unit price invoicing quantities are or will be based upon actual vendor weight tickets.
Backfill (item #15), gravel (item #16) and topsoil (item #17) quantities are estimated based on current field observation and are subject to change.



DOW CHEMICAL U.S.A.
An Operating Unit of the Dow Chemical Company
U.S.A. Accounts Payable
2020 Willard H. Dow Center
Midland, Michigan 48674

VOUCHER REQUEST

REQUEST PAYMENT TO	VENDOR CODE	PURCHASE ORDER	DATE	
	Oct 1, 1996			
	NAME	Treasurer of the United States of America		
	ADDRESS - STREET	US EPA, Region 5, Regional Finance Office		
CITY	STATE	ZIP CODE		
P.O. Box 70753, Chicago IL 60673				
ATTENTION:				

MESSAGE ON CHECK STUB

Docket Number V-W-001-95

REASON/PURPOSE OF PAYMENT

Civil Penalty

VOUCHER DISTRIBUTION

AMOUNT	LEDGER (5)	COST CENTER (7)	SUB FUNCT. (3)	SUFFIX (3)	AXT (2)	SOURCE 1 (13)	SOURCE 2 (7)
7 4 8 1 9 50		9873					
4 8 1 9 50		9874					
\$149,639.00	◀ TOTAL AMOUNT						

DUE DATE OR TERMS

 ATTACHMENTS (Check if Yes)

AUTHORIZED SIGNATURE - FULL NAME

DEPARTMENT

Hanging Rock Site Manager

PHONE NO.

(815) 423-2600

MASTER NO.

507084

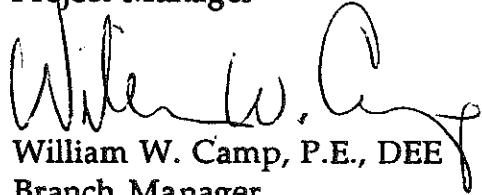
May 17, 1996
Page 9

ERM appreciates the opportunity to submit this proposal and looks forward to working with you on this project. Furthermore, if you have any questions concerning this proposal please give us a call at 304-757-8017.

Sincerely,



Timothy B. Cart, P.E.
Project Manager

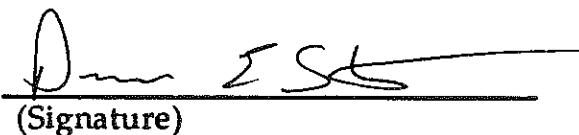
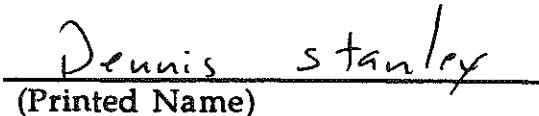


William W. Camp, P.E., DEE
Branch Manager

ACCEPTANCE OF PROPOSAL

If this proposal is acceptable to you, please indicate your agreement by having an authorized officer sign this proposal in the space provided below and by returning to the designated ERM office the executed copy of this proposal, or by issuing a Purchase Order. On receipt of the acceptance copy or Purchase Order, we will commence the performance of the services described in this proposal.

Agreed and Accepted By:


(Signature)
(Printed Name)

Environmental Compliance Leader 10/3/96
(Title) (Date)

Please return signed acceptance to:

Environmental Resources Management, Inc.
Attention: Tim Cart
600 A Prestige Park
Hurricane, WV 25526

DOW CONFIDENTIAL
AUTHORIZATION REQUEST
The Dow Chemical Company

GLOBAL BUSINESS:		VALUE CENTER:		
TITLE: Hanging Rock Fire Pond Closure		AUTH. NO.: 221120	LOCATION: Hanging Rock	DATE: 09/30/96 REVISED: RTO:
PROPOSAL SUMMARY:				
<p>Closure of the Hanging Rock Fire Water Pond as part of an agreement with the United States EPA, Region V involving the voluntary remediation of the Pond for credits toward the Styron/Magnum BIF penalties. This Closure Plan is a Site project and will be funded as an Expense Project.</p>				
Capital Spending (\$M)	1996 150	1997	1998	1999
PROPOSAL RESOURCES: DIRECT	OTHER RESOURCES:			2000
<u>FIXED CAPITAL</u> THIS REQUEST PREVIOUSLY AUTHORIZED TOTAL PROPOSAL	<u>US\$M</u>	<u>ALLOCATED CAPITAL</u> FIXED (Related Auth) WORKING CAPITAL <u>EXPENSES:</u> PEOPLE CHANGE (# PEOPLE)	US\$M START-UP OTHER MFG R&D MKT	150
LOCAL CURRENCY UNITS: THIS REQUEST PREVIOUSLY AUTHORIZED TOTAL PROPOSAL				
BENEFITS OF THIS PROPOSAL:				
<p>This project will allow the Site to Close the Old Fire Water Pond while obtaining credits toward the BIF penalties imposed on Styron/Magnum by the USEPA.</p>				
ALTERNATIVES CONSIDERED:				
RISK AND SENSITIVITIES:				
<p>The scope of the project is based on the assumption that the soil below the Pond liner does not contain significant contamination. If significant contamination is detected, the contracting firm handling the closure (ERM), will inform Dow and propose a sampling plan for further characterization.</p>				
PROPOSAL'S VALUE CREATION Prepared by:		GLOBAL VALUE CENTER: CUMULATIVE ECONOMIC PROFIT		PROJECT TYPE
		NPV (\$MM)	HISTORY (\$MM)	
DCF%	@10.75%	19xx-19xx	0-5 yrs	6-10 yrs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EXECUTIVE DEPARTMENT USE		DATE:	BOARD NO.:	
SECRETARY:		CEO		

DOW CONFIDENTIAL
AUTHORIZATION REQUEST APPROVAL
The Dow Chemical Company

GLOBAL BUSINESS:	VALUE CENTER	DATE: 09/30/96
TITLE: Hanging Rock Fire Pond Closure	AUTH. NO.: 221120 LOCATION: Hanging Rock SPONSOR: Dennis Stanley	REVISED: RTO:
BUSINESS DIRECT		NAME EMPL. NO DATE
GROUP VP	_____ _____	
GLOBAL BUSINESS VP	_____ _____	
BUSINESS DIRECTOR/MGR.	_____ _____	
BUSINESS MFG DIRECTOR/MGR.	_____ _____	
MFG LEADER	_____ _____	
SITE MANAGER CONCURRENCE (OR DELEGATE)	_____ _____	
INDIRECT (Site Infrastructure)		
GLOBAL FUNCTION VP	_____ _____	
AREA PRESIDENT	_____ _____	
AREA FUNCTION MGR.	_____ _____	
SITE MANAGER	 Dave Shaffer	507084 10/3/96
LEGAL (1)	_____ _____	
BY: (2)	_____ _____	
Return completed authorization package to Corporate Capital Planning or Site/Area Capital Planning.		
(1) >\$2,000M requires legal review. Corporate Capital Planning will obtain. (2) Authorizing electronic signature above confirmed by E-mail according to Dow Controllers policy.		

09/19/96 14:27 0517 638 2456

CONTINENTAL OPER

001

09/17/96 TUE 14:44 FAX 517 638 9816
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

001

IN THE MATTER OF:

THE DOW CHEMICAL COMPANY
HANGING ROCK PLANT
ROUTE 2, BOX 253
IRONTON, OHIO 45638

DOCKET NO. V-W-001-95

CONSENT AGREEMENT AND
FINAL ORDER

EPA ID NO.: OHD 039 128 913

I. PREAMBLE

On October 31, 1994, a Complaint was filed in this matter pursuant to Section 3005(a) of the Resource Conservation and Recovery Act, as amended (RCRA), 42 U.S.C. Section 6928(a), and the United States Environmental Protection Agency's Consolidated Rules of Practice Governing the Administrative Assessment of Civil Penalties and the Revocation or Suspension of Permits, 40 CFR Part 22. The Complainant is the Chief, Enforcement and Compliance Assurance Branch, Waste, Pesticides and Toxics Division, United States Environmental Protection Agency (U.S. EPA), Region 5. The Respondent is The Dow Chemical Company.

II. STIPULATIONS

The parties, desiring to settle this action, enter into the following stipulations:

1. Respondent has been served with a copy of the original Complaint and Proposed Compliance Order (Docket No. V-W-001-95) in this matter. The Complaint is incorporated herein by reference.
2. Respondent is a Delaware corporation whose registered agent in Ohio is C.T. Corporation System, 815 Superior Avenue,

Post-It™ brand fax transmittal memo 7671		# of pages >	19
To:	Dennis Stanley	From:	Terry Cox
Co:		Co:	
Dept:		Phone #	517 636-4267
Fax #	614 533-4232	Fax #	517 638-2456

08/19/96 14:27 517 638 2456
09/17/96 TUE 14:44 FAX 517 638 9836

CONTINENTAL OPER
EHS REG GROUP - LEGAL

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N.E., Cleveland, Ohio 44114. Respondent owns and operates a facility which includes two boilers, R-1 and R-3, located on Gilruth Lane, Old Route 52, in Ironton, Ohio (the "Facility").

3. Respondent admits that Complainant has jurisdiction to issue the Complaint in this matter and jurisdiction to enter into this Consent Agreement and Final Order (CAFO). Respondent agrees not to contest such jurisdiction in any proceeding to enforce the provisions of this CAFO.

4. Respondent neither admits nor denies the specific factual allegations contained in the Complaint other than admissions made in Respondent's Answer.

5. Respondent explicitly withdraws its request for a hearing and waives any and all rights under any provisions of law to a hearing on the allegations contained in the Complaint or to challenge the terms and conditions of this CAFO.

6. If Respondent fails to comply with any provision contained in this CAFO, Respondent waives any rights it may possess in law or equity to challenge the authority of the U.S. EPA to bring a civil action in the appropriate United States District Court to compel compliance with the CAFO and/or to seek an additional penalty for the noncompliance.

7. Respondent consents to the issuance of the Final Order hereinafter set forth and hereby agrees to pay a civil penalty and performance of a Supplemental Environmental Project (SEP) as described in the Statement of Work (SOW) attached to and incorporated herein. Pursuant to Sections 3008(a) and 3008(g) of

RCEA, 42 U.S.C. §§ 6928(a) and 6928(g), the nature of the violations, Respondent's agreement to perform a SEP and other relevant factors, EPA has determined that an appropriate civil penalty to settle this action is ONE HUNDRED FORTY-NINE THOUSAND, SIX HUNDRED THIRTY-NINE DOLLARS (\$149,639.00). Respondent agrees not to claim or attempt to claim a Federal income tax deduction or credit covering all or any part of the cash civil penalty paid to the U.S. Treasury.

8. Respondent hereby certifies that, as of the date of this CAFO: (a) Respondent is not required to perform or develop the SEP by any Federal, State or local law or regulation; (b) Respondent is not funding any aspect of the SEP with any funding provided by a Federal, State, or local grant; (c) except for this Order (Docket No. V-W-001-95), Respondent is not required to perform or develop the SEP in settlement of any Federal, State, or local enforcement action; and (d) Respondent has not received, and is not presently negotiating to receive, credit in any other enforcement action for the SEP.

Not already required

*Finalized
Date*

9. Respondent shall give notice and a copy of this CAFO to any successor in interest prior to any transfer of ownership or operational control of the Facility. This CAFO is binding on Respondent and any successors in interest.

10. Nothing in this CAFO shall be construed to relieve Respondent from its obligation to comply with all applicable Federal, State and local statutes and regulations, including the RCRA Subtitle C requirements at 40 CFR Parts 260 through 270.

09/19/96 14:28 517 638 2456
09/17/96 TUE 14:45 FAI 517 638 9636

CONTINENTAL OPER
EHS REG GROUP - LEGAL

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Additionally, nothing in this CAFO shall be construed to constitute U.S. EPA approval of the equipment or technology employed by Respondent in connection with the SEP under the terms of this CAFO.

11. This CAFO shall become effective on the date it is signed by the Director, Waste, Pesticides and Toxics Division.

III. FINAL ORDER

*same as M.DIV
we will use same method*

Based on the foregoing stipulations, the Parties agree to the entry of the following Final Order:

12. Respondent shall, immediately upon the effective date of this CAFO, include the value of the feed rate of vapor gas in the vent header (generated from the process lines, raw material tank, and unreacted monomer tank fed to the boilers) when determining compliance with the operating limits specified in the Certification Of Compliance. Respondent shall calculate the feed rate of the vapor gas by determining a flow rate based on an engineering calculation of the worst case maximum flow rate of vapor gas possible multiplied by a worst case concentration of chloride and chlorine.

13. Respondent shall, immediately upon the effective date of this Order, monitor and record the flow rate of the liquid hazardous waste feedstreams fed to the boilers on an instantaneous or hourly rolling average basis pursuant to *we are using F/N* 40 CFR §266.103(c)(4)(iv).

14. Respondent shall, within fifteen (15) days of the

09/19/96 14:28 517 638 2456
09/17/96 TUE 14:45 FAX 517 638 8535

CONTINENTAL OPER
EH&S ERG GROUP - LEGAL

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effective date of this Order, submit to U.S. EPA a correct and accurate Certification of Compliance containing the non-extrapolated, applicable feed rate limits for boilers which burn hazardous waste based on the compliance test conducted in July of 1995, pursuant to 40 CFR §266.103(d). *Already done*

15. Respondent shall undertake the SEP pursuant to the SOW and complete the SEP no later than the schedule set forth in the SOW. The parties agree that the SEP will provide environmental and public health benefits. As described in the SOW, the SEP consists of remediation of the Fire Water Pond at the Facility.

16. The total cost for the SEP shall not be less than ONE HUNDRED NINETEEN THOUSAND, TWO HUNDRED SIXTY-TWO DOLLARS (\$119,262.00). Respondent shall provide Complainant with documentation of the expenditures made in connection with the SEP within ten (10) days of completion of the SEP.

17. Respondent shall apply for and obtain all permits and approvals necessary for the implementation and completion of the SEP activities. *None required*

18. Whether Respondent has complied with the terms, conditions and schedule of the SOW shall be solely determined by U.S. EPA. *Contractor will provide*

19. Respondent shall send a SEP Completion Report (SEP Report) to be received by U.S. EPA within thirty (30) calendar days of completion of the work required in the SOW. The SEP Report shall contain the following information:

(a) A detailed description of the SEP as implemented;

09/19/96 14:29 517 638 2456
09/17/96 TUE 14:45 FAX 517 638 9636

CONTINENTAL OPER
EH&S HEC GROUP - LEGAL

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- (b) A description of any operating problems encountered and the solutions thereto and identification of any deviations from the SOW, an explanation of why the deviation occurred and what occurred in its place;
- (c) Itemized costs, documented by copies of purchase orders and receipts or canceled checks; and
- (d) Certification that the SEP has been fully implemented pursuant to the provisions of this CAFO.

20. Any public statement, oral or written, made by Respondent making reference to the SEP shall include the following language: "This project was undertaken in connection with the settlement of an enforcement action taken by the U.S. Environmental Protection Agency alleging violations of the Resource Conservation and Recovery Act, as amended."

21. Respondent shall allow U.S. EPA to inspect the Facility at any time in order to confirm that the SEP is being completed properly and in conformity with the representations made herein, and that all records pertaining to the SEP will be kept at the Facility and made available to U.S. EPA and Ohio Environmental Protection Agency upon request. U.S. EPA or OEPA may share this information with any other parties requesting such information.

22. Respondent shall maintain legible copies of documentation of the underlying research and data for any and all documents or reports submitted to U.S. EPA pursuant to this CAFO.

Respondent shall provide the documentation of any such underlying research and data to U.S. EPA within seven (7) days of a request for such information. In all documents or reports, including, without limitation, the SEP Report, submitted to U.S. EPA pursuant to this CAFO, Respondent shall, by a responsible corporate official, sign and certify under penalty of law that the information contained in such document or report is true, accurate, and not misleading by signing the following statement:

I certify under penalty of law that I have examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

23. (a) In the event that Respondent fails to comply with any of the terms or provisions of this CAFO relating to the performance of the SEP described in paragraphs 15 through 22 above and/or to the extent that the actual costs for the SEP do not equal or exceed the cost of the SEP described in paragraph 16 above, Respondent shall be liable for stipulated penalties according to the provisions set forth below:

(i) Except as provided in subparagraph (ii) immediately below, for a SEP which has not been completed satisfactorily pursuant to paragraph 15 above, Respondent shall pay a stipulated penalty to the United States in the amount of THIRTY-SIX THOUSAND DOLLARS (\$36,000.00).

(ii) If the SEP is not completed satisfactorily,

09/19/96 14:30 517 638 2456
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but Respondent : (1) made good faith and timely efforts to complete the project; and (2) certifies, with supporting documentation, that at least ninety percent (90%) of the amount of money which was required to be spent was spent on the SEP. Respondent shall not pay any stipulated penalty.

(iii) If the SEP is satisfactorily completed, but Respondent spent less than ninety percent (90%) of the amount of money required to be spent for the project, Respondent shall pay a stipulated penalty to the United States in the amount of NINE THOUSAND DOLLARS (\$9,000.00).

(iv) If the SEP is satisfactorily completed, and Respondent spent at least ninety percent (90%) of the amount of money required to be spent for the project, Respondent shall not pay any stipulated penalty.

(v) For failure to send to U.S. EPA the SEP Completion Report required by paragraph 19 above, Respondent shall pay a stipulated penalty in the amount of FIVE THOUSAND DOLLARS (\$5,000.00) for each calendar day after the due date until the report is received by U.S. EPA.

(b) The determinations of whether the SEP has been satisfactorily completed and whether Respondent has made a good faith, timely effort to implement the SEP shall be in the sole discretion of U.S. EPA.

(c) Respondent shall pay stipulated penalties within fifteen (15) calendar days of receipt of written demand by U.S. EPA for such penalties. Method of payment shall be in accordance

09/19/96 14:30 517 638 2456
09/17/96 TUE 14:46 FAX 517 638 8636

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with the provisions of paragraph 29 herein. Interest and late charges shall be paid as stated in paragraph 30 herein.

24. Nothing in this CAFO shall be construed as prohibiting, altering or in any way limiting the ability of U.S. EPA to seek any other remedies or sanctions available by virtue of Respondent's violation of this agreement or of the statutes and regulations upon which this agreement is based, or for Respondent's violation of any applicable provision of law.

25. This CAFO shall not relieve Respondent of its obligation to comply with all applicable provisions of Federal, State or local law, nor shall it be construed to be a ruling on, or determination of, any issue related to any Federal, State or local permit.

26. (a) If any event occurs which causes or may cause delays in the completion of the SEP as required under this CAFO, Respondent shall notify Complainant in writing within ten (10) calendar days of the delay or Respondent's knowledge of the anticipated delay, whichever is earlier. The notice shall describe in detail the anticipated length of the delay, the precise cause or causes of the delay, the measures taken and to be taken by Respondent to prevent or minimize the delay, and the timetable by which those measures will be implemented. Respondent shall adopt all reasonable measures to avoid or minimize any such delay. Failure by Respondent to comply with the notice requirements of this paragraph shall render this paragraph void and of no effect as to the particular incident.

09/19/96 14:30 517 638 2456
09/17/96 TUE 14:46 FAX 517 638 9536

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involved and constitute a waiver of Respondent's right to request an extension of its obligation under this CAPO based on such incident.

(b) If the parties agree that the delay or anticipated delay in compliance with this CAPO has been or will be caused by circumstances entirely beyond the control of Respondent, the time for performance hereunder may be extended for a period no longer than the delay resulting from such circumstances. In such event, the parties shall stipulate in writing to such extension of time.

(c) In the event that the U.S. EPA does not agree that the delay in achieving compliance with the requirements of this CAPO has been or will be caused by circumstances beyond the control of Respondent, U.S. EPA will notify Respondent in writing of its decision and any delays in the completion of the SPP shall not be excused.

(d) The burden of proving that any delay is caused by circumstances entirely beyond the control of Respondent shall rest with Respondent. Increased costs or expenses associated with the implementation of actions called for by this CAPO shall not, in any event, be a basis for changes in this CAPO or extensions of time under section (b) of this paragraph. Delay in achievement of one interim step shall not necessarily justify or excuse delay in achievement of subsequent steps.

27. Whenever, under the terms of this CAPO, notice is required to be given or a document sent by one Party to another, it shall be directed to the individuals at the addressees

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09/17/96 TUE 14:47 FAX 517 638 8636

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specified below:

As to U.S. EPA:

Michael Cunningham
Enforcement & Compliance Assurance Branch (DRE-SJ)
United States Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604

As to Respondent:

Terry S. Cox, Environmental Manager
The Dow Chemical Company
Midland, Michigan 48674

28. Respondent shall also submit a copy of all documents and correspondence regarding this CAFO to Jerome Kujawa, Office of Regional Counsel (C-29A), United States Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604 and to Michael Savage, Ohio Environmental Protection Agency, Division of Hazardous Waste Management, 1800 WaterMark Drive, P.O. Box 1049, Columbus, Ohio 43215-1099.

29. Respondent shall pay a civil penalty in the amount of ONE HUNDRED FORTY-NINE THOUSAND, SIX HUNDRED THIRTY-NINE DOLLARS (\$149,639.00) within thirty (30) calendar days of the effective date of this CAFO. Payment shall be made by check payable to the "Treasurer of the United States of America". The check shall be mailed to U.S. EPA, Region 5, Regional Finance Office, P.O. Box 70753, Chicago, Illinois 60673. The name of the Respondent, the proceeding's Docket Number V-W-001-95, and the billing document number shall be clearly marked on the face of the check. Copies of the transmittal of the payment shall be sent to: the Regional Hearing Clerk, Resource Management Division (M-19J); Jerome

09/19/96 14:31 517 638 2456
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Kujawa, Office of Regional Counsel (C-29A), and Michael Cunningham, Enforcement and Compliance Assurance Branch (DRE-SJ); at U.S. EPA, 77 West Jackson Boulevard, Chicago, Illinois 60604-3590.

30. Pursuant to 31 U.S.C. Section 3717, Respondent shall pay the following amounts on any amount overdue under this CAFO:

(a) Interest. Any unpaid portion of a civil or stipulated penalty shall bear interest at the rate established by the Secretary of the Treasury pursuant to 31 U.S.C. Section 3717(a)(1). Interest will therefore begin to accrue on a civil or stipulated penalty if it is not paid by the last date required. Interest will be assessed at the rate of the United States Treasury tax and loan rate in accordance with 4 CFR § 102.13(c).

(b) Monthly Handling Charge. Respondent shall pay a late payment handling charge of TWENTY DOLLARS (\$20.00) on any late payment, with an additional charge of TEN DOLLARS (\$10.00) for each subsequent thirty (30) calendar day period over which an unpaid balance remains.

(c) Non-Payment Penalty. On any portion of a civil or stipulated penalty more than ninety (90) calendar days past due, Respondent shall pay a non-payment penalty of six percent (6%) per annum, which will accrue from the date the penalty payment became due and is not paid. This non-payment is in addition to charges which accrue or may accrue under subparagraphs (a) and (b) immediately above.

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31. Except as set forth in the stipulated penalties relating to performance of the SEP, failure to comply with any requirement of this CAFO may subject Respondent to liability for a penalty of up to

TWENTY-FIVE THOUSAND DOLLARS (\$25,000.00) for each day of continued non-compliance with the terms of the CAFO. U.S. EPA is authorized to assess such penalties pursuant to RCRA Section 3008(e).

32. This CAFO and the attached SOW constitute the entire settlement between the parties, and constitute final disposition of the Complaint filed in this case and stipulations hereinbefore recited. All prior discussions, negotiations, and document drafts are merged herein.

33. Each party shall bear its own costs and attorneys' fees in the action resolved by this CAFO.

34. Respondent's obligations under this CAFO shall end when it has satisfied all of the requirements of this CAFO.

35. Respondent waives any right it may have pursuant to 40 CFR 22.08 to be present during discussions with, or to be served with and reply to, any memorandum or communication addressed to the Director, Waste, Pesticides and Toxics Division, or his superiors, where the purpose of such discussion, memorandum or communication is to persuade such an official to accept and issue the CAFO.

36. The information required to be maintained or submitted pursuant to this CAFO is not subject to the Paperwork Reduction

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Act of 1980, 44 U.S.C. § 3501 et seq.

37. Notwithstanding any other provision of this CAFO, U.S. EPA expressly reserves any and all rights to bring an enforcement action pursuant to Section 7003 of RCRA, 42 U.S.C. Section 6973, or other statutory authority should U.S. EPA find that the handling, storage, treatment, transportation, or disposal of solid waste or hazardous waste at the Facility may present an imminent and substantial endangerment to human health or the environment. U.S. EPA also expressly reserves the right: (a) for any matters other than violations alleged in Complaint, to take any action authorized under Section 3008 of RCRA; (b) to enforce compliance with the applicable provision of the Ohio Administrative Code; (c) to take any action under 40 CFR Parts 124 and 270; and (d) to enforce compliance with this CAFO.

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09/19/96 14:32 Q517 638 2456
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IV. SIGNATORIES

Each undersigned representative of a Party to this CAFO consisting of fifteen (15) pages certifies that he is fully authorized to enter into the terms and conditions of this CAFO and to legally bind such party to this document.

Agreed to this _____ day of _____, 1996.

By _____

For The Dow Chemical Company,
Respondent

Agreed this _____ day of _____, 1996.

By _____

Joseph M. Boyle, Chief
Enforcement and Compliance Assurance Branch
Waste, Pesticides and Toxics Division
U.S. Environmental Protection Agency, Region 5,
Complainant

The above agreed and consented to, it is so ordered

this _____ day of _____, 1996.

By _____

Norman R. Niedergang, Director
Waste, Pesticides and Toxics Division
U.S. Environmental Protection Agency, Region 5

IN THE MATTER OF:
THE DOW CHEMICAL COMPANY
HANGING ROCK PLANT
ROUTE 2, BOX 253
IRONTON, OHIO
DOCKET No. V-W-001-95

Dow Fire Pond Closure**ATTACHMENT****STATEMENT OF WORK FOR THE SUPPLEMENTAL ENVIRONMENTAL PROJECT
THE DOW CHEMICAL COMPANY, IRONTON, OHIO
CASE V-W-001-95**

Subject	SUPPLEMENTAL ENVIRONMENTAL PROJECT STATEMENT OF PROJECT SCOPE
Background	The purpose of this document is to describe the scope of the Supplemental Environmental Project (SEP), which is part of the settlement of V.W. 001 '95. The project is a Fire Pond Closure at Dow's Hanging Rock Plant in Ironton, Ohio.
Scope of Work	<p>This project consists of the following substantive elements:</p> <ol style="list-style-type: none">1) pond dewatering,2) sampling of sludge and soil underlying liner,3) sludge solidification, excavation and disposal,4) liner cutting, rolling, removing and disposal,5) underlying soil excavation and disposal,6) confirmation of acceptable closure, based on Ohio EPA risk-based closure standards,7) pond backfilling, grading and limestone covering and8) report preparation and submittal. <p>All project elements, except number 6 shall be completed regardless of contaminant concentrations. Element 6 will vary based on measured contaminant concentrations, as later specified.</p> <p>The project contains the following incidental elements:</p> <ol style="list-style-type: none">1) All significant findings and project progress will be periodically reported to both US EPA and Ohio EPA,2) periodic mobilization and demobilization,3) Dow's potential changes in contractor(s) and details of the project, as long as the project continues to essentially meet its description in this document and both US EPA and Ohio EPA are fully informed as to these changes within thirty (30) days of such changes and4) all contractor personnel will be HAZWOPER 40 hour trained and participate in a medical monitoring program.

Substantive Element 1 Pond De-watering	<p>The pond will be de-watered by treating the water in Dow's waste water treatment facility and discharging the treated water through Dow's NPDES permit.</p> <p>The water volume is estimated to be 1.8 million gallons and that it will take 30 hours of pumping to remove the water from the pond.</p>
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Dow Fire Pond Closure

**Substantive Element 2
Sampling**

Ten (10) samples will be collected: two (2) for disposal characterization and eight (8) underlying soil samples. The disposal characterization samples will be (A) a composite sample of pond sludge, and (B) a composite sample of soil underlying the liner.

Eight (8) samples will be collected from the soils underlying the liner. The sludge in the bottom of the Pond will be "pushed back" away from the sample location in order to prevent the cross contamination of the samples. Four (4) samples will be collected from the bottom of the Pond and one (1) sample will be collected from each side wall. The holes will be advanced perpendicular to the liner.

The eight (8) samples will be analyzed for priority pollutants (VOCs and SVOCs). These analytical results will be compared to Ohio EPA risk-based closure standards, which are based on U.S. EPA Risk Assessment Guidelines, to determine their significance.

The two (2) disposal samples characterization will consist of Full TCLP (metals, VOC, SVOC, pesticides & herbicides), ignitability, reactivity, and pH.

**Substantive Element 3
Sludge Removal**

One composite, full TCLP analysis (including pesticides and herbicides) will be performed on the sludge. (This is disposal characterization sample (A), mentioned above.) If the sludge passes the analysis as non-hazardous, the sludge will be transported to Green Valley Landfill for disposal as a solid waste. If the sludge fails the analysis, then the sludge, or any segregable hazardous portion of the sludge, will be appropriately transported and disposed of as a hazardous waste.

The sludge will be mixed with sawdust and lime as needed to permit the material to pass the paint filter test for disposal. Upon solidification, the sludge will be excavated and disposed of appropriately.

**Substantive Element 4
Liner Removal**

The liner will be cut into sections, rolled, placed into piles, loaded into trucks and disposed. The liner will be transported to Green Valley Landfill for disposal as a solid waste.

Dow Fire Pond Closure

Substantive Element 5 Underlying Soil Removal

Six (6) inches of underlying soil will be removed for disposal as a solid waste. During the excavation process the former drain lines will be cut off and plugged at the point where they leave the pond. The concrete influent pad will be removed and disposed of as solid waste.

One composite, full TCLP analysis (including pesticides and herbicides) will be performed on the underlying soil. (This is disposal characterization sample (B), mentioned above.) If the underlying soil passes the analysis as non-hazardous, the underlying soil will be loaded directly into trucks for transport to Green Valley Landfill for disposal as a solid waste. If the underlying soil fails the analysis, then the underlying soil, or any segregable hazardous portion of the underlying soil, will be appropriately transported and disposed of as a hazardous waste.

Substantive Element 6 Confirmation of Acceptable closure

Four (4) samples will be collected from the remaining soil. The four (4) samples will be analyzed for priority pollutants (VOCs and SVOCs). These analytical results will be compared to Ohio EPA risk-based closure standards, which are based on U.S. EPA Risk Assessment Guidelines, to determine their significance.

If significant contamination exists, Dow will modify its closure plans. Alternatively, Dow may elect to either: 1) submit a plan for completion of closure, using Ohio EPA risk-based closure standards, for U.S EPA approval, which may consist of completion of acceptable closure, or 2) complete acceptable closure using Ohio EPA risk-based closure standards.

If the removed, remaining soil is non-hazardous, the removed, remaining soil will be loaded directly into trucks for transport to Green Valley Landfill for disposal as a solid waste. If the removed, remaining soil fails the analysis, then the removed, remaining soil, or any segregable hazardous portion of the removed, remaining soil, will be appropriately handled as hazardous waste, in compliance with all applicable regulations.

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Substantive Element 7 Finishing Closure

After all of the underlying soil is removed and acceptable closure is confirmed, the pond will be backfilled by pulling the material used to construct the berms back into the pond. This berm material will be moved with an excavator, placed and compacted with a dozer. The pond will be backfilled and graded to match the grade surrounding the pond with a southeastern sheet flow. Additional fill material will be added as needed to complete the backfill. No compaction testing will be performed. After the backfill is completed, the surface of the pond area will be covered with a six (6) inch base of #57 limestone.

Substantive Element 8 Report

An appropriate report documenting the closure for the Pond will be prepared. This report will present a compilation of all data collected during the investigation, an interpretation of those data in the context of the geologic/hydrogeologic setting and a description of the closure activities conducted during this project. This report shall be completed and sent to US EPA and Ohio EPA within six (6) months of project completion.

Dow Fire Pond Closure

Incidental Element 1 Interim Reports	All significant findings and project progress will be periodically reported to both US EPA and Ohio EPA.
Incidental Element 2 Mobilization	There shall be periodic mobilization and demobilization as necessary or convenient.
Incidental Element 3 Incidental Changes	Both US EPA and Ohio EPA shall be fully informed, within thirty (30) days, of any changes in contractor(s) and/or details of the project, which Dow may freely make as long as the project continues to essentially meet its description in this document.
Incidental Element 4 Contractor Training	All contractor personnel will be HAZWOPER 40 hour trained and participate in a medical monitoring program.



Centre Analytical Laboratories, Inc.

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Page 1

ENVIROCLEAN
355 EAST CAMPUS VIEW, Ste. 250
COLUMBUS, OH 43235

Date Received: 07-NOV-96
Date Reported: 15-NOV-96

Account Number: 1226

Invoice Number: 12449

Contact: MYRA KART

Date Collected: 06-NOV-96

Client ID: DOW SLUDGE 1

Lab ID: L13110-1

PARAMETER	UNITS	RESULT	LIMIT OF QUANTIFICATION	TEST METHOD	TEST DATE	ANALYST
MERCURY-TCLP LEACHATE	mg/L	< .0002	.0002	EPA 7470	11-NOV-96	JH
METALS-TCLP LIST	mg/L					
SILVER-TCLP LEACHATE	mg/L	< .05	.05	EPA 200.7	11-NOV-96	JH
ARSENIC-TCLP LEACHATE	mg/L	< .05	.05	EPA 200.7	11-NOV-96	JH
CHIUM-TCLP LEACHATE	mg/L	2.63	.01	EPA 200.7	11-NOV-96	JH
MIUM-TCLP LEACHATE	mg/L	< .01	.01	EPA 200.7	11-NOV-96	JH
CHROMIUM-TCLP LEACHATE	mg/L	< .01	.01	EPA 200.7	11-NOV-96	JH
COPPER-TCLP LEACHATE	mg/L	< .01	.01	EPA 200.7	11-NOV-96	JH
LEAD-TCLP LEACHATE	mg/L	< .03	.03	EPA 200.7	11-NOV-96	JH
SELENIUM-TCLP LEACHATE	mg/L	< .05	.05	EPA 200.7	11-NOV-96	JH
VOLATILES-TCLP LIST	ug/L					
VINYL CHLORIDE	ug/L	< 10	10	EPA 8240	15-NOV-96	GS
1,1-DICHLOROETHENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
2-BUTANONE	ug/L	< 10	10	EPA 8240	15-NOV-96	GS
CHLOROFORM	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
CARBON TETRACHLORIDE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
BENZENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
1,2-DICHLOROETHANE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS

Submitted by
Centre Analytical Labs, Inc.
Reviewed and Approved by:

Kevin J. Lloyd
Laboratory Supervisor





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Page 2

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Date Received: 07-NOV-96
Date Reported: 15-NOV-96

Account Number: 1236

Invoice Number: 12449

Contact: MYRA HART

Date Collected: 06-NOV-96

Client ID: DOW SLUDGE 1

Lab ID: Li3110-1

PARAMETER	UNITS	RESULT	LIMIT OF QUANTIFICATION	TEST METHOD	TEST DATE	ANALYST
TRICHLOROETHENE	ug/L	< 5	5	EPA 8240	15-NOV-96	CS
TETRACHLOROETHENE	ug/L	< 5	5	EPA 8240	15-NOV-96	CS
CHLOROBENZENE	ug/L	< 5	5	EPA 8240	15-NOV-96	CS
1,4-DICHLOROBENZENE	ug/L	< 5	5	EPA 8240	15-NOV-96	CS
SEMI-VOLATILE PCB LIST						
METHYLPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
4-METHYLPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
4-METHYLPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
PENTACHLOROPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
2,4,5-TRICHLOROPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
2,4,6-TRICHLOROPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
HEXACHLOROETHANE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
HEXACHLOROBUTADIENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
NITROBENZENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
HEXACHLOROBENZENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
2,4-DINITROTOLUENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
PYRIDINE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS

Submitted by
Centre Analytical Labs, Inc.
Reviewed and Approved by:

Kevin J. Lloyd
Laboratory Supervisor





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Page 3

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Contact: MYRA HART

Date Collected: 06-NOV-96

Client ID: DOW SLUDGE 1

Lab ID: L13110-1

PARAMETER	UNITS	RESULT	LIMIT OF QUANTIFICATION	TEST METHOD	TEST DATE	ANALYST
PESTICIDES - NOT LISTED						
GAMMA-BHC	ug/L	< .133	.133	EPA 8080	15-NOV-96	CS
HEPTACHLOR	ug/L	< .133	.133	EPA 8880	15-NOV-96	CS
HEPTACHLOR EPOXIDE	ug/L	< .133	.133	EPA 8080	15-NOV-96	CS
ENDRIN	ug/L	< .667	.667	EPA 8080	15-NOV-96	CS
METHOXYCHLOR	ug/L	< 6.67	6.67	EPA 8080	15-NOV-96	CS
TOKAPHENE	ug/L	< 6.67	6.67	EPA 8880	15-NOV-96	CS
OBSCURES - TCLP LIST						
z,4-D	ug/L	< .5	.5	EPA 8150	15-NOV-96	CS
SILVEX	ug/L	< .167	.167	EPA 8150	15-NOV-96	CS
CYANIDE-REACTIVE	mg/Kg (dry)	< .193	.193	EPA SW 846	12-NOV-96	JY
CORROSIVITY	PH UNITS	7.62	0	EPA 9040	07-NOV-96	GHD
FLASH POINT	Degrees F	> 140	140	EPA 1010/1020	15-NOV-96	SUB
FREE LIQUID	-	NO	0	EPA 9035	07-NOV-96	GHD
PERCENT SOLIDS	%	41.15	.01	SM 2540A	07-NOV-96	GHD
PH	PH UNITS	7.62	0	EPA 9040	07-NOV-96	GHD
REACTIVE SULFIDE	mg/Kg (dry)	32.9	6.33	SW 846 7.3.4	08-NOV-96	GAF

Submitted by
Centre Analytical Labs, Inc.
Reviewed and Approved by:

Kevin J. Lloyd
Laboratory Supervisor





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Page 1

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COLUMBUS, OH 43235

Date Received: 07-NOV-96
Date Reported: 15-NOV-96

Account Number: 1226

Invoice Number: 12449

Contact: MYRA HART

Date Collected: 06-NOV-96

Client ID: DOW SOIL 1

Lab ID: L13110-2

PARAMETER	UNITS	RESULT	LIMIT OF QUANTIFICATION	TEST METHOD	TEST DATE	ANALYST
MERCURY-TCLP LEACHATE	mg/L	< .0002	.0002	EPA 7470	11-NOV-96	JH
METALS - TCLP LIST						
SILVER-TCLP LEACHATE	mg/L	< .05	.05	EPA 200.7	11-NOV-96	JH
ARSENIC-TCLP LEACHATE	mg/L	< .05	.05	EPA 200.7	11-NOV-96	JH
PARIUM-TCLP LEACHATE	mg/L	.13	.01	EPA 200.7	11-NOV-96	JH
URANIUM-TCLP LEACHATE	mg/L	< .01	.01	EPA 200.7	11-NOV-96	JH
ROMIUM-TCLP LEACHATE	mg/L	< .01	.01	EPA 200.7	11-NOV-96	JH
COPPER-TCLP LEACHATE	mg/L	< .01	.01	EPA 200.7	11-NOV-96	JH
LEAD-TCLP LEACHATE	mg/L	< .03	.03	EPA 200.7	11-NOV-96	JH
SELENIUM-TCLP LEACHATE	mg/L	< .05	.05	EPA 200.7	11-NOV-96	JH
VOLATILES - TCLP LIST						
VINYL CHLORIDE	ug/L	< 10	10	EPA 8240	15-NOV-96	GS
1,1-DICHLOROETHENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
2-BUTANONE	ug/L	< 10	10	EPA 8240	15-NOV-96	GS
CHLOROFORM	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
CARBON TETRACHLORIDE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
BENZENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
1,2-DICHLOROETHANE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS

Submitted by
Centre Analytical Labs, Inc.
Reviewed and Approved by:

Kevin J. Lloyd
Laboratory Supervisor





Centre Analytical Laboratories, Inc.

3048 Research Drive, State College PA 16801 814-231-8032 FAX 814-231-1253

Page 2

ENVIROCLEAN
355 EAST CAMPUS VIEW, Ste. 250
COLUMBUS, OH 43235

Date Received: 07-NOV-96
Date Reported: 15-NOV-96

Account Number: 1226

Invoice Number: 12449

Contact: MYRA HART

Date Collected: 06-NOV-96

Client ID: DOW SOIL 1

Lab ID: L13110-2

PARAMETER	UNITS	RESULT	LIMIT OF QUANTIFICATION	TEST METHOD	TEST DATE	ANALYST
TRICHLOROETHENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
TETRACHLOROETHENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
CHLOROBENZENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
1,4-DICHLOROBENZENE	ug/L	< 5	5	EPA 8240	15-NOV-96	GS
<hr/>						
VI-VOLATILE POLY- ETHYLPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
J-METHYLPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
4-METHYLPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
PENTACHLOROPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
2,4,5-TRICHLOROPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
2,4,6-TRICHLOROPHENOL	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
HEXACHLOROETHANE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
HEXACHLOROBUTADIENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
NITROBENZENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
HEXACHLOROBENZENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
2,4-DINITROTOLUENE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS
PYRIDINE	ug/L	< 20	20	EPA 8270	14-NOV-96	CS

Submitted by
Centre Analytical Labs, Inc.
Reviewed and Approved by:

Kevin J. Lloyd
Laboratory Supervisor





Centre Analytical Laboratories, Inc.

Page 3

3048 Research Drive, State College PA 16801 814-231-8032 FAX 814-231-1253

ENVIROCLEAN
355 EAST CAMPUS VIEW, Ste. 250
COLUMBUS, OH 43235

Date Received: 07-NOV-96
Date Reported: 15-NOV-96

Account Number: 1226

Invoice Number: 12449

Contact: MYRA HART

Date Collected: 06-NOV-96

Client ID: DOW SOIL 1

Lab ID: L13110-2

PARAMETER	UNITS	RESULT	LIMIT OF QUANTIFICATION	TEST METHOD	TEST DATE	ANALYST
PESTICIDES - TCLP LIST						
GAMMA-BHC	ug/L	< .133	.133	EPA 8080	15-NOV-96	CS
HEPTACHLOR	ug/L	< .133	.133	EPA 8080	15-NOV-96	CS
HEPTACHLOR EPOXIDE	ug/L	< .133	.133	EPA 8080	15-NOV-96	CS
ENDRIN	ug/L	< .667	.667	EPA 8080	15-NOV-96	CS
METROXYCHLOR	ug/L	< 6.67	6.67	EPA 8080	15-NOV-96	CS
OXAPHENONE	ug/L	< 6.67	6.67	EPA 8080	15-NOV-96	CS
PESTICIDES - TCLP LIST						
2,4-D	ug/L	< .5	.5	EPA 8150	15-NOV-96	CS
SILVERX	ug/L	< .167	.167	EPA 8150	15-NOV-96	CS
CYANIDE-REACTIVE	mg/Kg (dry)	< .0967	.0967	EPA SW 846	12-NOV-96	JY
CORROSIVITY	pH UNITS	< 8.42	0	EPA 9040	07-NOV-96	GHD
FLASH POINT	Degrees F	> 140	140	EPA 1010/1020	15-NOV-96	SUB
FREE LIQUID	-	NO	0	EPA 5095	07-NOV-96	GHD
PERCENT SOLIDS	t	85.36	.01	SM 2540R	07-NOV-96	GHD
pH	pH UNITS	8.42	0	EPA 9040	07-NOV-96	GHD
REACTIVE SULFIDE	mg/Kg (dry)	19	3.35	SW 846 7.3.4	08-NOV-96	GAP

Submitted by
Centre Analytical Labs, Inc.
Reviewed and Approved by:

Kevin J. Lloyd
Laboratory Supervisor



L-X

DAILY FIELD REPORT

Date: 11-14-96

Project #: 109-72

Project: DOW Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. HART

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: On-site today: M. Hart; R. Kisor; J. Carpenter; Barney B.



Record of Activities

1600: Crew on-site. R. Kisor and J. Carpenter taking H+S course through Dow.

1605: First truck w/ #305 stone - dumped and delivered.

1610: M. Hart - checked in with Dennis Stanley and Jeff Stegman. We offered to doze soil out of way for trucks. Dan offered a 6" stone material to use for crossover improvement.

1630: Showed crew around fire pond area. Went over plan for the week, H+S issues and work strategies. Set up tool trailer in parking lot across from fire pond - okay w/ Dow.

1645: Second truck (25 tons) w/ #4 stone - dumped and delivered.

1705: Crew signed out - off-site. To hotel in Ashland.

Significant Events

50 tons stone delivered

D5 also on-site when we arrived.

DAILY FIELD REPORT

Date: 11/15/96

Project #: 109-72

Project: Dew Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: On-site today w/E.C.-M.Hart; R.Kisor, J.Carpenter;
Barney Brown - Foreman



Record of Activities

0645 - M.Hart on site

0700 - Crew on-site, obtained Permit for fence removal and Nut
works and sample collection.

0715 - Began taking down interior perimeter fence - south side. Using
acetylene torch to cut posts at ground surface

0830 - Measured fence to be taken down. (See diagram)

	N	← interior fence - permanent removal	
	W	E	BLDE
(TR ₁)		/ /	N = 206 ft
Temporary fence to (to replace	S		W = 127 ft
			E = 107 ft
			S = 205 ft
			OF = 262.5 ft
Significant Events	↑ outside fence permanent removal		(old) TR ₁ = +3 ft. + (old) TR ₂ = 60 ft.
	(O.F.)		
			↓ EAST

1/83 Total fence removal = 547.81 ft - w.l. top removal
~ 904.5 ft - nut

1/STAFF/GBETS/MISCELL

Total fence removed including temporary salvaged
p1 of 2 = 1007.50 feet

9:00

DAILY FIELD REPORT

Date: 11/15/92

Project #: 109-72

Project: Dew Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:



Record of Activities

0900 - Paul Gebhard on-site to collect samples. Scott J. Carpenter to get drain pipe (Ashland) and now see by land and C2 for truck (Huntington).

1000 - Samples could not be collected. Sludge too wet at bottom. At least 3 additional feet of bottom of pit. Paul off-site @ 1000. Basney and Rush continue to work on fence removal.

1220 - Lunch Break. 14 - 12

1345 - keBELL arrives from NEMO, CPT licensed.

1425 - south fence still down - 262.5 ft - down, rolled and stockpiled on slope.

1430 - Unloading 1-ton of drain pipe - 24" - 20' end fuel tank. place drain pipe in ditch.

1445 - Received work permit extension until 6:00 by DOW.

1600 - South fence down approx 3/4. Begin cleaning up job site and place post/tube for "caution" tape around fire pond.

Significant Events

1630 - Crew off-site. Rush @ 1630; Mym, Danny, John @ 1630

P 2 0 2

DAILY FIELD REPORT

Date: 11/18/96

Project #: 109-72

Project: Dow Fire Pond
remediation

EnviroClean

Site Manager: M. Hart

Signature: [Signature]

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes:

On-site Brief from E.C. - M. Hart, Randy Kisor
Barney Brown.

Raining - drizzle. Soil very wet.

Record of Activities

0700 - B. Brown m-site.

1105 - M. Hart m-site Requesting Dow personnel to issue work permit.
1130 - R. Kisor m-site.

1115 - called Green Valley for disposal arrangements.

1115 - Found someone at guard house & issue permit
wouldnt take reading w/ C. immediately - waited
until 12 ad he still couldnt leave b/c
president to take C's reading. No work done.
Down for 45 minutes.

1200 - lunch

1300 - Back from lunch reading man pipe. Plant obtained at WWTP.

1410 - Entered south end part of east fence down. B. Brown to checklist
for drain pipe.

Significant Events

1440 - B. Brown return w/ pipe. Don from Dow has application
for waste disposal at Green Valley. He says he will
sign it, have at the guard house. and call Randy/
Keller to pick it up.

1/93

1:STAFF 2:GUESTS 3:MISC 4:FR

Bone 3⁺

page 1 of 2

DAILY FIELD REPORT

Date: 11/18/96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager:

K.L. Hart

Signature: KLH

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:



Record of Activities

1630 - Met with fence crew. Putting up caution tape.

James Hager from misc site here at 700 am. to replace
rusty.

1700 - Site secured.

Hours Today

B. Brown Travel = 3.0 hrs; on-site 730 - 515

R. Kinn Travel = 3.0 hrs; on-site 1130 - 515

M. Hart Travel = 3.0 hrs; on-site 1100 - 315

1705 Spoke w/ Paul Leibhart of ERM to review
work to date. Will keep him posted.

Significant Events

* 30" Drain pipe in place and secured.

* Searched portions of east and west fence down.

* Disposal applications will have to be thermal over fire extremely
careful!

DAILY FIELD REPORT

Date: 11/19/96

Project #: 109-72

Project:

Don Fire POND
REINTEGRATION

EnviroClean

Site Manager:

M. Hart

Signature:

M. Hart

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes: On-site today from E.C.; M. Hart, Barney Brown,
Janice Hagan (On-Site).

Record of Activities

- 0700 - Crew on-site. Obtained work permit from Don Murphy.
1015 - FENCE gate near cross over has been removed and
stockpiled to be rebuilt by Don. One fence pole
broken (old fence).
1100 - Called Green Valley Landfill. Randy Kelly said he got the
Signed copy of the applic. but the sample copy from county
signed. will drop it off again for signature. Let Don Murphy
know to look for it and sign it.
- Do T sandblast to be delivered today and NOT delivered
tomorrow morning.
- Diced fuel to be delivered 11/20/96 am.
- Talked to Steve Weston. As of yet he hasn't prepared a
change order for moving the stockpiled soil as
backfill to fire pond. ERM is aware a change order will
be coming.

Significant Events

- 1300 - Lunch till 1400.
1545 - Tractor trailer of sandblast arrived. Dug at SW end of pond.
1600 - Called Randy Kelly, a landfill not in. Left detailed
message at Sciotoday to begin moving trucks for disposal
Thursday am.

INSTAFFISGBETSWMISCIDFR

Page 1 of 2

DAILY FIELD REPORT

Date: 11/19/96

Project #: 109-72

Project: Day Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M HART

Signature: M HART

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:



Record of Activities

~~10:00~~

1545- Sawdust-trailor arrived. Unloaded off site c 1615.
1630- Talked w/ Steve Huston will cost a D25 D
dump truck and a 935 953B track loader for
backfilling. Will tentatively schedule for Monday
11/25/96 delivery. I will help locate local
source for the equipment.

1640 Called Steve Huston again. Said I needed an operator
next week to replace On-Site (James Hayes) He said some
quip available - off cascade next week.

1730- First load sawdust mixed w/ sludge. Cross-over completed.

1735- Left message w/ Paul Cebhard of EML to come collect a
sample Wed, 20th, afternoon and will call again tomorrow.

1800- Paul Cebhard called - will be on-site after 10:00 to collect samples. Also said
Significant Events

- 1- All but ~ 75 ft of fence down + rolled, stockpiled
- 1- 1 load sawdust delivered + dumped.
- 1- Cross-over completed. Hauled ~ 12-20 yds (30 T) of large stone (4"). lab
from site stockpiles. Sludge solidification Begun.

1003 HSTAFFISGBETSWMSCDFR

B. Brown 7-5³⁰

J. Hayes 7-5³⁰

M. Hart 7-5³⁰ (+) P.M. 1 hour

page 2 of 2

DAILY FIELD REPORT

Date: 11/20/96

Project #: 109-72

Project: Dow Fine Pond

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager:

M. Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

Enviroclean - Mys Hart, Brandy Brown, James Hagan(On-Site)



Record of Activities

0700 - Crew on-site. One load sandust on-site and off-loaded.
0740 - On-site - Randy Koller. Sorta w/ him regarding work. He said approved Dow to dispose soil and sludge. Trucks will come in tomorrow morning. Can call today if we need some more sandust. He said that if Dow requires weighing trucks in and out then there will be a demurrage charge. I asked for prices and he said he'd get them to me. He also said he'd talk to Mr Murphy regarding scaling trucks. Wants to load 30 T in each trailer/truck. Mr. Koller also said he has sand for backfill. Can price to bid. Could well deliver on-call. Finally, he said he has an articulated dump and truck loader 463/953 to rent. Will call me or Steve Chester area general. I also told Mr. Koller that Dow requires a non-hazardous waste manifest with each truck.

805 - Copied Daily Field Reports through 11/19/96 and placed them in Dennis Stanley's mailbox - WWTB Building.

Significant Events

950 - Beginning mixing sandust w/ sludge. M. Hart ad J. Hagan working on fence and door, painting when necessary.

BP on-site to feed equipment and fill fuel tank.

1/83

1STAFFISGBETS/MISCELLFR

DAILY FIELD REPORT

Date: 11/30/96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M.H.A.R.I.

Signature: 

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:



Record of Activities

955 - Called Mike Westore, left message regarding name or yard of eq. Barber Fish and who that Party with of Green Valley may have equipment and will call with price quote.

1005 - Friday delivery of 953 and dump. Steve Called. Monitor when we can get done at excavation to send to another job.
By Friday.

1020 - Tractor trailer w/ sandblast in situ to drop load. Off-site @ 1043

1035 - Spoke w/ Rick Cloud (S.C.) Let him know of local equipment suppliers. Give him phone #3. Also, I let him know that I have only one operator (Barney) committed for Monday and till end 2-3 more.

1050 - Rick Cloud called. Will confirm backfill price w/ road, pottery and confirm delivery. Cannot commit to quantities at this time.

Significant Events

1155 - Tractor trailer w/ sandblast in situ @ 1155. Dump load off-site @ 1205. Dump his load w/ tape on trailer. Appears to be damaged. One large hole in tape.

1200 - Called Party Kelly - asked for 3 loads more sandblast. said he'd try but may only be able to get 2 trucks. I said bring what he could.

INSTAFFISGBETS/MISC/DFR

DAILY FIELD REPORT

Date: 11/20/96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: MTH/CH

Signature: JMF

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: Today - Sludge Solidification



Record of Activities

12:25. Star (Victor) indicated that we appear to have a lot more sludge quantity than originally estimated. Star said to speak w/ Jeff Stegman and make him aware what we must bill by quantities.

12:40 - Lunch to 1:40. Paul Gebhard of ERM on-site to collect soil samples.

12:45 - Spoke with Jeff Stegman. I told him that estimated quantities of sludge were low, that q'ty may almost double because sludge very wet and more than anticipated. I let him know that we could stop anytime until approval - but he said we need to finish work.

1:50P - Tractor trailer on-site w/ sandust. Saved a turtle from the pit. Towed off @ 3:30 (1530)

Spoke w/ Paul Gebhard. I let him know that Monday was the day we plan to start backfilling. And that we need samples run and approved by Friday. He said he'd call lab and determine turnaround times today before he left. I let him know how critical our schedule was.

1:53P. Called Landry Lorry. Cancelled last load of sandust. Also ordered 5 trucks for tomorrow am, staggered ~15 min apart. Also ordered 6 trucks afternoon (1:00pm).

1/83 STAFF SGBETS MISCELLANEOUS

DAILY FIELD REPORT

Date: 1/20/95

Project #: 109-72

Project: Dow - Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: J.D.H.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

Completed 1 roll of film - 24 exposures



Record of Activities

1530 - Total product needed to solidify sludge = 88.67 tons
1630 - Paul (whom Off-site collected the four soil samples he
needed for analysis. He said he called the lab and
would have results back for him if he got the
samples there by tonight. He said he'd call me tomorrow
and Friday.

Barney and Jason are spreading sludge and cutting a
load road in pit (camp) for trucks in the
morning.

1645 - Talked w/ Chris Hartford. I will be getting 2 laborers tomorrow
and a truck to complete fence removal activities.
1/2 day and evening. Reserve hotel room.

1800 - Off-site Turn in Permit to Dow - Daily

Significant Events

* - Solidification complete
* - Fence down
* - ERM Samples obtained.

1/93

Crew 7th an - 6³⁰ pm.

H:\STAFF\SGBETSMISC\DFR

Room

p. 4 of 4

DAILY FIELD REPORT

Date: 1/21/96

Project #: 109-72

Project: Day Fire Pond
Remediation

EnviroClean

Site Manager: M. HART

Signature: M. Hart

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085

(614) 848-4494

(614) 433-0886 (Fax)



Notes:

On-site today. Barney Brown, James Hagan,
Myra Hart, Alan Bridges, Chuck Bradley.

Record of Activities

0700 - On-site. First truck here. Reviewing. Appears to be okay
to haul. D. Stanley issues today's work permit.

0715 - Four trucks on-site scaled in. First one loaded 730

0700 - Gave a copy of the change order #1 to Dennis Stanley
who said he would make a copy and give the
other copy to Jeff Stegman for signature.

Truck having a little difficulty getting out of the
pit on the ramp due to rain and slick clay. Barney
taking some time to work on the ramp. Time to haul the
second truck out, re-scale and storage so we can't
have to go all the way down the ramp.

0730 Two more dump trucks on-site.

Significant Events

0730 - Loading sixth truck.

0745 - Seven trucks total. Waiting on 8th to come. Captain
Greenberg is expect 4 more trucks this morning. He said he'd
just keep turning trucks around.

1/93

HSTAFFISGBETS|MISCDFR

DAILY FIELD REPORT

Date: 11/21/96

Project #: 109-72

Project: Dow Fire Pond
Renovation

EnviroClean

Site Manager: M Hact

Signature: [Signature]

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes:

Record of Activities

~930 - Called Steve Hutton. Confirmed our conclusion from yesterday and staffing for Monday.

Spoke with Dennis Stanley. He said he would communicate to Jeff Stegeman that we have ~ 1x the estimated amount of sludge.

10:00. Excavating out sump while waiting for trucks. Sump consists of a steel pipe - 3-5' diameter and connects to ~ 4' thick. (Photos). Bid says nothing about sump. chose to remove it since pipe filled w/ sludge.

Yesterday when I spoke w/ Jeff Stegeman, we agreed that the fence that will be put back up after work will need to be moved to utilize road improvements. Dow would relocate fence. EnviroClean will not require any fence. We agreed that initially # P.C. not replacing any fence.

Significant Events

1035 Three more trucks in.
Truck # 510 weighed out and is back to ~~fill up~~, unload. Too heavy dust cont.

1055 - Truck # 510 back again - 2,000 lbs heavy still.

11STAFF/SGB/ETS/MISC/DFR

DAILY FIELD REPORT

Date: 11/21/96

Project #: 109-72

Project: DOW FIRE POND
REMEDIALION

EnviroClean

Site Manager: M HART

Signature: [Signature]

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes: Weather - rain, sleet, cold, hail

Record of Activities

Talked with Dennis Stanley. He requests that the large iron pipe formerly connected with sewer pipe leading to pond (SE corner of pit) be put in with scrap metal on-site.

130 - Spoke with Paul Garberard. Said Analytical will be in Friday afternoon to assume soil samples come back okay.

120 - Alan Brink and Clinton Dudley on-site. Went through HHS planning by Dow.

125 Truck L-900 - latch not working properly on back gate. Barney having to spend time helping him fix it so didn't wait full out back.

130 Early today called. He has four trucks in route. I have to get to landfill so no more trucks clean site after 3pm. So 7 more truck loads today. Start again tomorrow.

Significant Events

Truck #L 900. unloading it entirely off-site empty c1305.
BREAKS LATCH.

1310 - from Hayes Back from Lunch return Barney.

1335 - had work permit modified for Don Murphy for clean + check

1/83

H:STAFF S:GBETS MISC DFR

DAILY FIELD REPORT

Date: 11/21/96

Project #: 109-72 Project: Dow Fire Pond

EnviroClean
Site Manager: MTHART Signature: MTHART

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:



Record of Activities

1335 - B Brown out for lunch. Hagen on excavator loading truck.

Told Steve Lester no way ready to backfill Monday. Delay equipment rental until Monday after Thanksgiving holiday. Delay work since there is a lot more sludge present than estimated.

1430. Alan + Chuck working on cutting pipes in pond, scraping the fence materials.

1500 Last Truck out today. Not yet finished with sludge removal. Appears to be 200 more tons yet.

Spoke w/ Deane and J.H. Stegman. They are aware of how much sludge has been hauled off today and how much sludge remains. Today total sludge removed = 480 tons.

Significant Events

Crew continue working on removing scrap metal and moving sludge and rock in fire pond.

1530 - Talked to Green Valley L.S. They say sludge is coming on with the next. I asked to have him send 1 load of sandstone in the morning.

1603

HSTAFFISGBETSIMISCDFR

DAILY FIELD REPORT

Date: 11/21/96

Project #: 104-72

Project: Dow Fire Pond
REMEDIALION

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: MTH/AT

Signature: MCH/AT

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

432.75
Tons off
today, Study
only



Record of Activities

1315 - Based on weight tickets from Dow, 432.75 tons of sludge
arrived today. Called Rick Pond at office. Equipment
was cancelled until Dec. 2, Monday after Thanksgiving.

1355 - Spoke with Paul Gibbons and summarized day's events.

1635 - Ordered O₂ & Acetylene for tomorrow delivery @ 10-10:30 am.
also reserved for Hammer & Compressor to be picked up
between 800 and 900 and return by 4:30 pm.

Needed jack hammer to break up concrete slab and drainage
pad from NE side of pit corner.

1600 Spoke w/ Dennis Stanley. He said that EnviroClean
offices to get a broken nail & final cost of parts since
they need to get the extra money allocated.

Significant Events

1700 - Crew off-site Triton, port in mind. Fence material - odo -
all in Dow's scrap dump truck.

1/83

Climb 70° - 60°

11STAFFISGBETSIMSCIDFR

DAILY FIELD REPORT

Date: 11/22/96

Project #: 109-72

Project: Day Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. HART

Signature: M. HART

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

0700 B. Brown, J. Hagan, M. Hart on-site. Tractor trailer of sawdust delivered and dumped. Off at 7:10am. Obtained work permit for today from Dow.

B. Brown tightening tracks on the Kobelco. Informed Dan Murphy that we will be transporting soil manly - wednesday next week.



Record of Activities

0715 Called Rick for petty cash but I don't need it - just remembered.
0905 First truck arrived. No initial paperwork exchanged with the truck. Called Randy Kelly. Said he went to raw and wanted my parking permit. I said we discussed earlier that you would until you see the manifests. He said to send them off tomorrow for paperwork. I told him to send around 4:15 today and you see them next week & talking with you next truck that left you landfill.

0900 BP on-site to fill gas tank and equipment.
Told the truck driver w/ sludge (not I called for more paperwork). To go without. If Dow holds him up at the gate, call his supervisor and let him know.

0900 Sent Alan and Chuck to Arland to pick up Jackhammers and compressor. Not back yet. Opened at 0800.

Significant Events

0930 BP filled tank + loaded up truck. Off-site.

1015 Randy Kelly National Chippewa Co. tank and took anyone. Randy Kelly showed up with his landfill forms. Since he didn't let him know what we were out until then morning, agreed to pay damage on 1 truck that waited

HSTAFFISGBETSNSCIDFR

from 9:00 to 10:30 to get loaded and off site.

Alan and Chuck back from rental place. Said the company was slack about safety chains on the vehicle hitch. Make note not to use them again.

#509
Concrete

DAILY FIELD REPORT

Date: 11/22/96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager:

Myer Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:



Record of Activities

1240 Sent James to Lummis. Alan back from getting new tip for jackhammer. Loading trucks.

Randy Kelly called. Requested that concrete blocks be loaded into a Truck #509 (Blade 9600 Collins & Sons) since it has a steel bed. Told Randy I would call him tonight for Monday schedule.

1305 Randy Kelly from landfill called. Trucks are complaining that half road so back they're tearing up tracks. I told him only 1 truck stuck today. They're parked on flat ground. I will try to get some stone on the road if possible. He said okay. I explained what I didn't think trucks are getting them up.

1305 Put Chuck in the excavator. James spent > 1 hr. at Ditch So far.

1345 - Jackhammer is not working efficiently on concrete sump.

Ask Dow if we can decom it and put it back in the Significant Events

hole. otherwise, need to rent a backhoe w/ Ram hoe to break it up.

1350 - Talked to Paul Gibbard. Said soil samples from bottom of pond are clean - non-detect. Also he could be here next week for a "surprise" inspection. We discussed putting concrete back in pond and backfilling. We will hear the idea by Dennis ~~Stevens~~ or Jeff Stigmar.

I:STAFF P:GUESTS M:MISS C:DFR

DAILY FIELD REPORT

Date: 11/22/96

Project #: 109-72

Project: DOW Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. HART

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

1. Call OJ Art
2. Call with cash next week



Record of Activities

1350 - Barney Bourn to lunch. Chuck on dozer, James on excavator.
1500 - Alan and Chuck off-site. To return equipment and
hammer (1.5 hrs to Athlone & Back 4 miles) + 3 hrs travel

Called Valley National - Can pick up tents - they said Monday.

Called Randy Kelley - left message to not schedule any trucks for
Monday. Will call Monday for Tuesday schedule.

Hart Truck mt. Securing site for weekend. Told Dan Murphy no
trucks out for Monday.

Total Sludge today = 295.36 TONS

Total Soil today = 97.54 TONS - All of bottom of pond excavated
and disposed.

Therefore - Total Sludge disposal (transport/arrow/solidif) = 727.81

Significant Events

Alan 7⁵⁰-7⁵⁰ - No lunch ± 12 hrs 7.5
4.5

Chuck 7⁵⁰-7⁵⁰ - No lunch = 12 hrs 12.0

Mynn 7 - 4-7 no lunch = 12.5 includes travel

Barney B³ 4-7 yes-lunch = 11.5 includes travel

James H. B³ 4-7 yes lunch = 11.5 includes travel

P 7 of 3

DAILY FIELD REPORT

Date: 11/25/96

Project #: 109-72

Project: DW Fire Pond
Demolition

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. HART

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:



Record of Activities

1330 - Weather conditions are poor. Heavy, steady rain. Slopes steep, soft and clay is very slippery.

Called Valley Material Glass. They scheduled pickup for Tuesday. I told him we may not be here due to rain but I'd call him when we get back on-site so they could come by. Cylinders locked in tool trailer.

Plan on-site @ 1330. Caught in traffic accident on highway 70 at relay.

1350 - Still raining - harder now.

1400 - Spoke with Jeff Steeman. Decided to put concrete slump back in pit and close it up. Cannot be broken w/ jackhammer. We will clean out sludge.

1410 - Shut down due to rain. We will go to work. Will work Wednesday if stops raining tonight, but unlikely.

1415 - Turned in daily work permit. Let Dan know we were leaving for the day.

1420 - Greatly called. Said can call Randy Kelly at home Sunday if need tools Monday.

1430 - Talked w/ Rick Cland. Rescheduled loader and dump for Tues. delivery.

Off-site @ 2:30 pm.

Crew 7:30-2:30 + P 2 of 2
3 hr. truck home

DAILY FIELD REPORT

Date: 11/25/96

Project #: 109-72

Project: Dow FIRE Pond
REMEDIATION

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: MH

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes:

Copied field notes through week ending
11/22/96 and left in Dennis Stancliff's
mail box.

Record of Activities

- 1030 - Called Dow. No rain. Expected storm this afternoon and Thursday + Wednesday.
- 1015 - Myra on-site. Met contractor offering equipment and backfill. I asked for a unit to deposit for ~1000 T backfill.
- 1030 - Started daily work summit from Dan Murphy. Talked w/ Jeff Stegman. He's going to get final word on change order today, also requested a memo outlining reasons for change in tonnage of Shingle disposal.
- 1035 - Called Steve Huston, not in office today. Called Exton office and left message for him to call me.
- 1145 - Talked to Dan Murphy. Said he would get 411 for sign by Silver Clinton to Jeff Stegman. Pulled sleeve and left fax # at his voice mail.
- 1200 - Raining, kept working. Alan left home later than planned so not on-site yet.

Significant Events

Lines off south wall of pit. Now we ~ 30 tons of bent soil.
Top slope with lines is buried into soil ~ 1 foot, will have to be excavated to remove lines.

1230 - Raining harder and steadily.

1/63

HSTAFFISGBETS/MISC/DFA

Benny - 7¹²-10³⁰ travel +
Myra - 7¹²-10³⁰ travel +
Alan - 7¹² - travel +

PAGE 1 of 2

DAILY FIELD REPORT

Date: 12-2-96

Project #: 109-72

Project: Dow Free Pond
Permeation

EnviroClean

Site Manager: M. Hart.

Signature: M. Hart

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes:

0700. Barney and Chuck D. on-site. Charged fluids, maintenance equipment. E.C. Kovelco off-site. Rental Komatsu on-site. Also, dump truck and track loader on-site.
Site very wet and muddy. Working conditions not

Record of Activities

Very favorable due to saturated soil conditions.

0730. Myers called Dan Murphy. Checked to make sure work permit issued to B. Birn. Dan indicated crew was on-site, issued a permit to Barney and they are currently working.

1335. M. Hart on-site. Crew already taken break. Site conditions not real good for working in the pond.

1345 Called Valley National Gravel. Picked up O2 and acetylene tanks this morning but didn't receive change. Said they will mail change to our office.

1346 Called Rick. asked him to call Seward and make sure billing starts Wednesday, not today.
Called Randy Kelly @ landfill. Hoping to run trucks

1520. Valley National Gravel - picked up O2 and acetylene tanks

1645. Called to order fuel for tomorrow. No answer.

Significant Events

Approx 2½ walls have 6" soil removed and stockpiled.

1800 - off-site

1/83

I\STAFF\SGBETS\MISC\DFR

* All fence material that was stockpiled for Dow has been taken off the work area over holiday weekend.

10 hrs C. Daily

10 hrs. B. Birn

7.5 m. HART

page 1 of 1

DAILY FIELD REPORT

Date: 12-3-96

Project #: 109-72

Project: Don Fire Pond

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

0700 - On-site. Myra, Chuck & Dan Barron Brown. Obtained daily work permit from Don Murphy. Steve Hilton called. Does not have time to finish what Jeff Stegman asked for. Asked me to get data Jeff and get him what he needs. Talk to Jeff @ 830. Told him I will get memo to him based on Record of Activities new calculation.

0730 - Called for 3 dump trucks. Ready not in but left instructions for 3 trucks. will call.



0900 - Called Chuck Hartford. Said he would double check my calculations and I sent him a fax with pond dimensions and draft memo. Don Murphy since I could use Dan's fax machine. Fax sent c 940 am.

0930 - Called for Fuel delivery. May not be able to make it until tomorrow a.m.

1000 - Spoke w/ Dan and Jeff Stegman. I asked them for a signed change order. ~~I don't~~ He wouldn't assure he had to sign anything. I told him there was a signature page. He'd try to find it and sign it. He gave me verbal authorization to begin backfilling using soil on-site. Dan said to use about half of the soil.

1025 - First dump truck on-site today. off c 1045.

Significant Events

BP on-site to feed up. Topped off tank & equipment. Re-scheduled delivery for Thursday am.

1115 - Called Wendy Kelly. will turn 4 trucks - 5 trucks around today. Have 2 more in addition to the 3 on the way - will keep turning them around till 3:00 pm.

DAILY FIELD REPORT

Date: 12-3-96

Project #: 109-72

Project: Dow Five Pond
Remediation

EnviroClean

Site Manager: M. HART

Signature: 

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes:

- 1220 - Myra + Barney to lunch. Chuck stayed and loaded one dump truck w/ soil.
1230 - Chuck to lunch.
1345 - Truck in, getting loaded.

Record of Activities

- * Majority of soil from sidewalls is down and stockpiled. Having more difficulty getting to of sidewalls because soft, slippery wet clay.
- 1400 Two more dump trucks on-site. Spoke w/ Dow employee & guard house to let them know trucks on-site needing load fill papers signed. Dan Murphy in meeting. Didn't know if anyone else in company car sign, but would call on as soon as loaded trucks pulled into gate.
- 1425 Called Chuck. Gave him hotel fax # to send draft memo and calculations. Talked to Rick Blod. Said he will call to let me know if a new operator is coming up tonight or tomorrow am.
- Called Randy Pecky. Ordered trucks to start tomorrow @ 0730 am. After 10-12 trucks will call w/ info about how many more.

Significant Events

- 1630 - Jeff Stegeman handed me the signed change order in backfilling
1730 - Off-site
 From today 7-5th Rain, Chuck, Myra

1/83

HSTAFFISGBETS|MISC\DFR

* Soil off today = 167.28 tons
Total soil to-date = 269.82 tons

Page 2 of 2

DAILY FIELD REPORT

Date: 12-4-96

Project #: 109-72

Project: Five Pond eDow
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

0700 - B.Brown, C.Dudley and M.Hart on-site. Work permit obtained by Don Murphy of Dow.
K.Kiser also on-site today.
Today's task; break up concrete - try again -; load trucks w/ soil for disposal;
begin backfilling pond w/ available material stockpiled on-site.



Record of Activities

0715 - First 2 trucks on-site - Buc Trucking. During truck loading activities, transported soil from stockpile to pond for backfill.

0915 - Don has asked us specifically NOT to use the soil stockpiled in certain areas of the site! They said we can use the remaining soil. However, I informed both Duane and Dennis that this soil is very wet and cannot be used until it dries out. Therefore, I told Duane that we will have to start trucking it in from off-site. He said okay.
I called Randy Keller and asked him how many trucks - he can get 3-4, ~~every 10 minutes~~, apart, continuous. Getting backfill from a very local source.

1105 - Scheduled 100 meeting with Dow to present reasons for change in quantities

Significant Events

Met Randy Keller on-site. He will bring in a load of 6" rock for cross culvert improvement and send more trucks for disposal and begin sending trucks w/ backfill.

DAILY FIELD REPORT

Date: 12-4-96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean

Site Manager: M. Hart

Signature: 

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

1300. Meeting w/ Duane, Jeff Stegman and Dennis Stanley. Told them about actual quantities vs. quantities obtained from their engineering drawings. Told them that we must supply a change order for the increase in field dimensions of the pond. They understood why change order is needed. They want to go back to their board Record of Activities



only one time, so they want change in all quantities at once. They decided they will measure the pond independently using a transit and tape, and we should use the measurements they give us. I said we'd issue a change order as soon as we got their measurements.

1400 - Called for a second load of rock for road improvement. Dow is currently taking measurements of the pond.

Backfill material coming in from off-site consists of sand, pretty clean, brown-reddish broken. ~30 Tons / load. 45 minutes round trip.

Decor dump truck. Finish with it. Call Rick Cline to have it taken off. Left message on his voice mail

Significant Events

300 - Called Rick. Take dump off site. Rusty & shop tomorrow. w/ pressure washer need.

530 - Dark. Shut down equipment, job site.

1/103

HSTAFFSGBETSIMSCIDFR

0600 - off site.

Hours - B. Bryan	10
M. Hart	10
C. Dabbs	10
R. Kim	10 + 6 truck = 16 -

page 2 of 2

DAILY FIELD REPORT

Date: 12-5-96

Project #: 109-72

Project: DOW FIRE POND
REMEDIALION

EnviroClean

Site Manager: M. HART

Signature: M. Hart

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes:

0700. Barney Brown, Chuck Dibble, Myron Hart on-site. Called cloudy. Should get some rain this afternoon.

0825 - Called Green Valley Landfill. Hardly will have 5-6 trucks in flotte per day to meet schedule.

Record of Activities

Called Nick to prepare Purchase Order for BWC Trucking statutory quantities delivered per day.

0945. Continuing backfilling, cutting south berm. Asked Dennis to send someone to confirm how much we can cut off berm. He said maximize, as long as sheet flow into drainage ditch occurs.

1000 - Called our scheduled hauler to check on haul. Should have been here this morning.

1045 - BP Haul on-site to haul trucks + reserve tank.

1146 - Jeff Stegeman dropped off final numbers to use for backfill calculations.

Significant Events

1000 - Barren at lunch. Haul road getting real soft - difficult for trucks to unload. Having to dump load further away from pond. Ordered 2 loads of the large 16" rock for haul road. Left message at his 2 phone numbers.

1103 STAFFISGBETSIMSCIDFR

Talked w/ Dennis. hit him + recommended that Dow put up a silt fence if gravel not being placed.

DAILY FIELD REPORT

Date: 12-5-96

Project #: 109-72

Project: Dan Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: MHART

Signature: JM

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

1630 Called BWC Trucking. Trucks are coming in so heavy (30-31 tons) > 80,000 lbs that they're sinking in our gravel haul road. Asked him to lighten up the loads a bit. He said okay, but bid based on 30 ton loads. I told him most trucks coming in over 30 tons.



Record of Activities

1715 - Last of the trucks in today arrived. Raining steadily
1840 - last truck stuck on haul road, too wet and
trucks too heavy - Carl Randy left message for him
to call. Need to cancel trucks.
He called back. I canceled for tomorrow until I
call back.

Total Backfill purchased today = 1441.82 TONS

TOTAL Backfill to Date = 1768.07 TONS

Off-site C

Significant Events

Rain!

f 2 of 2

DAILY FIELD REPORT

Date: 12-6 - 96

Project #: 109-72

Project: DOW FIRE POND
REMEDIALION

EnviroClean-Midwest, Inc.~

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

0730: B. Brown, M. Hart, C. Dudley on-site. Rain has stopped, clear skies. Called to get one load of rock for haul road and trucks at backfill started this morning.



Record of Activities

1100 - First load of Backfill in. Had to get #2 stone on haul road before we could begin backfilling. Rain made roads wet and soft. Ordered 3 loads of the stone. Stone took ~ 2 hours to get hauled from quarry.

1500 - Trucks have been in and out all day. Dennis Stanley asked about final #'s for tonnage to give to the board. I showed him to my memo dated Nov 20 1996 and our Change Order #1 and the schedule of values. I told him at this point there will be no significant (if 3000 T or more) change in amount of Backfill purchased. Today, after backfilling ~2000 Tons, pond appears to be ~ 1/2 full. Note that also we began material used to fill, not available for

1500 Called Randy Kelley. Confirmed schedule for Monday - 5 truck hauling all day - backfill. Start 7:30 am.

Significant Events

Called Lick - Need Excavator by 200 Tuesday 12/10/96

Last truck at c. 3:30. Finish pushing sand into pond and scene site.

1/83 Total Backfill Today: 672.52 T

H:STAFF S:GETS I:MISC D:FR

Total To Date = 2,440.59 T.

Off-sell @

DAILY FIELD REPORT

Date: 12/9/96

Project #: 109-72

Project: Dug Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean
Site Manager: M HART

Signature: [Signature]

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: ⁰⁷⁰⁰

On-site. B. Brown and Jeff Carpenter - B. Brown
Foreman.



Removed last 6" of soil from top of sideslopes,
stockpiled on-site. Trucks bringing in fill

Record of Activities

Material all day.

Off site @ 1800

B P brought diesel fuel: 118 gal at ~~10.00/gal~~

Total Backfill Delivered Today = 1288.06

Total Backfill To Date =

Time 1 hr.

Significant Events

DAILY FIELD REPORT

Date: 12/10/96

Project #: 109-72

Project: Dow Fire Pond

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

0700. B. Brown on-site. Trucks on-site to take
soil to landfill for disposal. Also, trucks bringing
in backfill.



Record of Activities

1000 Rusty Kiser on-site. No support

1010 - Myra Hart on-site.

Spoke with Bill Lamp. Explained what Dow needed to go to Yerin
Superior for final carts. Also said to tell Dow that the final
report will be to them by Jan 15

Thru off-site @ 1220

Hauled in 1253.74 tons - 49 trucks

amount of soil hauled off for disposal 125.81 tons

Offsite 18:20

Rusty + Pooley had 1hr. lunch.

Significant Events

Rusty took out 2 fence posts of existing fence
while taking out old gas line with dozer.

Carrier picked up PC 200 at 14:00 tracks clean, glass good.

DAILY FIELD REPORT

Date: 12-11-96

Project #: 109.72

Project: Dow Fire Pond
Demolition

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes: 0700 on site B. Brown, ^{W. Brown} ~~B. Brown~~ ~~W. Brown~~ ~~driv~~
Trucks bringing in backfill (sand)

Record of Activities

Total backfill for Today = 56 trucks at 1437.90 tons

1 hour lunch for both of us.

off site 1800

Had BP refueled tank + machinery
138 gal at ~~10.00~~

Significant Events

Rained last night site OK

DAILY FIELD REPORT

Date: 12-12-96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes: 0700 on Site B. Brown

Rained all night site wet

Rusty left site 08:00

Record of Activities

Had 2 loads of #2³ in truck different road
for trucks by switching with vault

Had 2 loads of 57³ brought in for vault

Waited for stone to make road then brought sand
in

Told Jeff Carpenter to come to site 09:00

On Site 12:00 No lunch

Total truck fill for today 25 trucks at 625.96 tons

Rained on & off all day. Off site 17:30

Significant Events

DAILY FIELD REPORT

Date: 12-13-96

Project #: 109.72 Project:

Dow Fire Pond
Remediation

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes: 0700 on Site B. Brown, Jeff Carpenter
Hauling in backfill

Record of Activities

B.P. filled up machinery & tank 84 gal. at ~~████████~~

Total backfill for today 601.72 tons = 23 trucks

Off site 12:00

Savis picked up Volvo truck 11:30

Significant Events

DAILY FIELD REPORT

Date: 12-16-96

Project #: 109.72

Project: Dow Fine Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: Bruno Brown Signature: Bruno Brown

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: 07.00 on Site B. Brown & Jeff Carpenter



Record of Activities

Pushed backfill in hole

6 Trucks showed in 1584.73 Tons of backfill today

Bruno had lunch 1hr. Jeff did not

Off site 17:30

To do paperwork for Bruno 17:30 - 18:00

Rained all day.

Significant Events

DAILY FIELD REPORT

Date: 12-17-96

Project #: 109.72

Project: Down Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

07:00 On Site B. Brown +
Jeff Carpenter



Record of Activities

- Pushed backfill today
- (6) trucks hauled in 1669.77 tons of backfill today.
- BP delivered diesel for tank + equipment
77 gals.
- Barney + Jeff had 1hr. lunch today
- hole is close to being full
- Off Site 17:30
- Barney did paperwork from 17:30 - 18:00
- Rained in AM

Significant Events

DAILY FIELD REPORT

Date: 12-18-96

Project #: 109.72

Project: Down Fireland
Remediation

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



ERM

Notes: 07:00 On Site Jeff Carpenter
B. Brown

Record of Activities

Had 4 trucks bring in 109.40 tons of Till Sand.
Am.

Put 3 loads of #2 in pit called in 2 more to fill
109.74 tons
Talked to Dennis Stanley to get ok to start
bringing in Topsoil he said yes go ahead and start

Total Topsoil 9 trucks at 256.65 tons

Barney 1 hr. lunch Jeff none.

Hole filled and graded started to topsoil

Off site 17:30

All Barney - 5 hr. paperwork.

Significant Events

DAILY FIELD REPORT

Date: 12-19-96

Project #: 109,72

Project: Dow Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: 07:00 On Site B. Brown, Jeff Carpenter



Record of Activities

Total Topsoil for today 11 trucks at 257.24 tons

Total Topsoil for job 320 trucks at 543.89 tons

Straw was delivered 9:00 AM 100 bales
Did not put straw down Don Murphy said they are
going to put seed down on Monday 12-23-96
Barney had his lunch Jeff didn't
Finished topsoil set up salt fence along ditch
Put Wildlife Refuge signs back up
finished filling up pit with #2's
left rocks for them put rest of #2's on roads and
carried off site
Called Don Murphy if the job was satisfactory
with Dow. He said yes!

Told him I'll be here on 12/23/96 to pick up site trailer.

Jeff Carpenter off site 16:00

Significant Events Barney B. off site 17:00

Jeff carpenter drove back to shop 16:00 - 17:00

Barney B. drove back to shop 17:00 - 20:00 + .5 hr paperwork.

DAILY FIELD REPORTDate: 12-13-96Project #: 109.72Project: Dow Fine Pond
Remediation

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)Notes: 07:00 on Site B. Brown, Jeff Carpenter
Handling in backfill**Record of Activities**

B.P. filled up machinery & tank 84 gal. at ~~10:00~~

Total backfill for today 1001.72 tons = 23 trucks

offs site 12:00

Savis picked up Volvo truck 11:30**Significant Events**

DAILY FIELD REPORTDate: 12-12-96Project #: 109-72 Project: Down Fire PondRemediation

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
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(614) 848-4494
(614) 433-0886 (Fax)**ERM**

Notes: 0700 On Site B. Brown
 Rained all night site wet
 Party left site 08:00

Record of Activities

Ned 2 loads of #2 is more different road
for trucks by hitching with vault

Ned 2 loads of 57# brought in for vault

Waited for stone to make road then brought sand
in

Told Jeff Carpenter to come to site 09:00

On Site 12:00 No Lunch

Total stockpile for today 25 trucks at 1,25.96 tons

Rained on & off all day. Off site 12:30

Significant Events

DAILY FIELD REPORTDate: 12-11-96Project #: 109.72Project: Dow Fire Pond
Demolition

EnviroClean

Site Manager: Barney Brown Signature: Barney Brown

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Notes: 0700 on site B. Brown, ~~Rusty Lee~~, ^{Jeff Beagle} 5 trucks bringing in backfill (sand)

Record of Activities

Total backfill for Today = 56 trucks at 1437.90 tons

I have lunch for both of us.

off site 1800

Had BP refueled tank + machinery
138 gal at ~~10.00~~

Significant Events

Rained last night site OK

DAILY FIELD REPORT

Date: 12-16 - 96Project #: 109-72

Project:

DOW FIRE POND
REMEDICATION

EnviroClean

Site Manager: M.HartSignature: M.Hart

EnviroClean-Midwest, Inc.

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 (614) 433-0886 (Fax)



Notes:

0730: B.Brown, M.Hart, C.Dudley on-site. Rain has stopped, clear skies. Called to get one load of rock for haul road and trucks at backfill started this morning.

Record of Activities

1100 - First load of Backfill in. Had to get ~~#2~~ stone on haul road before we could begin backfilling. Rain made roads wet and soft. Ordered 3 loads of ~~#2~~ stone. Stone took ~ 2 hours to get hauled from quarry.

1500 - Trucks have been in and out all day. Dennis Stanley asked about final #'s for tonnage to give to the board. I showed him to my memo dated Nov 20 1996 and our Change Order #1 and the Schedule of Values. I told him at this point there will be no significant (ie. 3000 T or more) change in amount of Backfill purchased. Today, after backfilling ~2,000 Tons, pond appears to be ~ 1/2 full. Note - that also no berm material used to fill, not available for

1500 Called Randy Kelley. Confirmed schedule for Monday - 5 truck hauling all day - backfill. Start 7:30 am.

Significant Events

Called Dick - NEED Excavator by 2:00 Tuesday 12/10/96
 Last truck out c. 3:30. Finish pushing sand into pond and secure site.

1003 Total Backfill Today = 672.52 T
 Total to Date = 2,440.59 T.

1STAFFISQBTSIMISCDFR

Off-site @

DAILY FIELD REPORT

Date: 12-5-96

Project #: 109-72

Project: Dow Fire Pond
REMEDIALION

EnviroClean

Site Manager: M. HART

Signature: M. Hart

EnviroClean-Midwest, Inc.

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Notes:

0700. Barney Brown, Chuck Dudley, Myra Hart on-site. Called
cloudy. Should get some rain this afternoon.

0825 - Called Green Valley Landfill. Landfill will have 5-6
trucks in Harte per day to meet schedule.

Record of Activities

Called Rick to prepare Purchase Order for BWC Trucking stating
quantities delivered per day.

945. Continuing backfilling, cutting south berm. Asked Dennis to
send someone to confirm how much we can cut off
berm. He said maximize, as long a sheet flow into
draining ditch occurs).

1000 - Called and scheduled fuel for to check on fuel. Should
have been here this morning.

1045 - BP Fuel on-site to fuel trucks + reserve tank.

1145 - Jeff Stegeman dropped off final numbers to use for
backfill calculations.

Significant Events

1100 - Barney at lunch. Haul road getting real soft - difficult for trucks
to unload. Having to dump load further away from pond.
Ordered 2 loads of the large 6" rock for haul road.
Left message at his 2 phone numbers.

1/93

I:\STAFF\SGBET\MSIC\DFR

Talked w/ Dennis. told him + recommended that Dow
put up a silt fence if gravel not being placed.

DAILY FIELD REPORT

Date: 12-5-96

Project #: 109-72

Project: Dow Fire Pond
Remediation

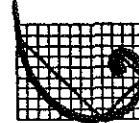
EnviroClean

Site Manager: M. Hart

Signature: J. Miller

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Notes:

1630 Called BWC Trucking. Trucks are coming in so heavy (30-31 tons) > 80,000 lbs that they're sinking in our gravel haul road. Asked him to lighten up the loads a bit. He said okay, but bid based on 30 ton loads. I told him most trucks coming in over 30 tons.

Record of Activities

1715 - Last of the trucks in today arrived. Raining steadily

1640 - last truck stuck on haul road, too wet and trucks too heavy - Call Randy, left message for him to call. Need to cancel trucks.

He called back. I canceled for tomorrow until I call back.

Total Backfill purchased today = 144.82 TONS

TOTAL Backfill to Date = 1768.07 TONS

Off-site C

Significant Events

RAIN!

f 2 of 2

DAILY FIELD REPORT

Date: 12-4-96

Project #: 109-72

Project: Fire Pond @ Dow
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

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Notes:

0700 - B.Brown, C. Duddy and M. Hart on-site. Work permit obtained by Don Murphy of Dow.
R Kiser also on site today.



Today's task; break up concrete - try again -; load trucks w/ soil for disposal;
begin backfilling pond w/ available material stockpiled on-site.

Record of Activities

0715 - First 2 trucks on-site - Buc Trucking - During truck loading activities, transporting soil from stockpile to pond for backfill.

0915 - Dow has stated us specifically NOT to use the soil stockpiled in certain areas of the site! They said we can use the remaining soil. However, I informed both Duane and Dennis that this soil is very wet and cannot be used until it dries out. Therefore, I told Duane that we will have to start trucking it in from off-site. He said okay. I called Randy Kelly and hired trucks. Asked him how many trucks - he can get 3-4, every 10 minutes apart, continuous. Getting backfill from a very local source.

1105 - Scheduled 100 meeting with Dow to present reasons for changes in quantities

Significant Events

Met Randy Kelly on-site. He will bring in a load of 6' rock for classroom improvement and send more trucks for disposal and begin sending trucks w/ backfill.

DAILY FIELD REPORT

Date: 12-7-96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean

Site Manager: M Hart

Signature: M Hart

EnviroClean-Midwest, Inc.

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ERM

Notes:

1300. Meeting w/ Duane, Jeff Stegman and Dennis Stanley. Told them about actual dimensions vs. quantities obtained from their engineering drawings. Told them that we must supply a change order for the increase in field dimensions of the pond. They understood why change order is needed. They want to go back to their board

Record of Activities

only one time, so they want change in all quantities at once. They decided they will measure the pond independently using a transit and tape, and we should use the measurements they give us. I said we'd issue a change order as soon as we got their measurements.

1400 - Called for a second load of rock for road improvement.
Dow is currently taking measurements of the pond.

Backfill material coming in from off-site consists of sand, pretty clean, brown-reddish broken. ~30 tons / load. 45 minute round trip.

Benton dump truck. Finish with it. Call Rick Clark to have it taken off site.
Left message on his voicemail

Significant Events

300 - called Rick. Take dump off site. Run to shop tomorrow. w/ pressure washer need.

530 - Dark. Shut down equipment, job std.

1/83

I:STAFF S:GBETS M:SIC D:FR

0600 - off site.

Hours - B. Brown 10
M Hart 10
C. Dushy 10
R. Kinn 10
 $10 + 6 total = 16$

Page 2 of 2

DAILY FIELD REPORT

Date: 62-3-96

Project #: 109-72

Project: Don Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

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(614) 433-0886 (Fax)

Notes:

0700 - On-site. Myra, Chuck & me Barron Brnn. Obtained daily work permit from Don Murphy. Steve Hilton called. Does not have time to finish what Jeff Stegman asked for. Asked me to get data Jeff and get him what he needs. Talk to Jeff @ 830. Told him I will get memo to him based on Record of Activities new calculation.



0730 - Called for 3 dump trucks. Randy not in but left instructions for 3 trucks. will call.

0900 - Called Chris Hartfond. Said he would double check my calculations and I sent him a fax with pond dimensions and draft memo. Don Murphy said I could use Dale's fax machine. Fax sent c 940 am.

0950 - Called for Fuel delivery. May not be able to make it until tomorrow a.m.

1020. Spoke w/ Duane and Jeff Stegman. I asked them for a signed change order. I don't believe anyone has to sign anything. I told him there was a signature page. He tried to find it and sign it. He gave me verbal authorization to begin backfilling using said ar-sch. Duane said to use about half of the unit.

1025. First dump truck on-site today. off c 1045.

Significant Events

BP on-site to fuel up. Total off tank + equipment & scheduled delivery for Thursday am.

1115 - Called Randy Kelly. will turn 4 trucks - 5 trucks around today. Have 2 more in addition to the 3 on the way - will keep turning them around till 3:00 pm.

DAILY FIELD REPORT

Date: 12-3-96

Project #: 109-72

Project: Dow Five Pond
Remediation

EnviroClean

Site Manager: M. HART

Signature: M. HART

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Notes:

- 1230 - Myra & Barney to church. Chuck stayed and loaded one dump truck w/ soil.
1230 - Chuck to church.
1345 - Truck in. Getting loaded.

Record of Activities

- * Majority of soil from sidewalls is down and stockpiled. Having more difficulty getting to of sidewalls because soft, slippery w/ clay.
1400 Two more dump trucks on-site. Spoke w/ Dow employee & guard house to let them know trucks on-site needing load fill papers signed. Dan Murphy in meeting. Didn't know if anyone else in company can sign, but would call him as soon as loaded trucks pulled int' gate.
1425 called Chuck. Gave him hotel fax # to send draft memo and calculations. Talked to Rick Olson. Said he will call to let us know if a person operator - is coming up tonight or tomorrow am.
Called Randy Keeley. Ordered trucks to start tomorrow @ 0730 am. After 10-12 trucks will call us up about how many more.

Significant Events

- 1630 - Jeff Stegeman handed me the signed change order in backfilling.
1730 - Off-site
Home today 7-5th Ray, Chuck, Myra

1/93

I:\STAFF\SGBETS\MISC\DFR

* Soil off today = 167.28 TONS
Total soil to-date = 264.82 TONS

DAILY FIELD REPORT

Date: 12-2-96

Project #: 109-72

Project: Dow Free Pond
Permeation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

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Notes:

0700. Barney and Chuck D. on-site. Charged fluids, maintenance equipment. P.C. Toolco off-site. Rental Komatsu on-site. Also, dump truck and track loader on-site.
Site very wet and muddy. Working conditions not



Record of Activities

- very favorable due to saturated site conditions.
0730. Never called Dan Murphy. Checked to make sure work permit issued to B. Birn. Dan indicated crew was on-site, issued a permit to Barney and they are currently working.
1335. M. Hart on-site. Crew already taken break. Site conditions not real good for working in the pond.
- 1345 Called Valley National Gases. Picked up O₂ and acetylene tanks this morning but didn't have change. Said they will mail change to our office.
1346. Called Rick. asked him to call Samsel and make sure billing starts Wednesday, not today.
- Called Randy Kelly @ landfill. hopeful to run trucks
1520. Valley National Gases - picked up O₂ and acetylene tanks
1645. Called to order fuel for tomorrow. No answer.

Significant Events

Approx 2/3 walls have 6" soil removed and stockpiled.

1800 - off site

1/93

11STAFF 15BETS 15MISC 10DFR

* All fence material that was stockpiled for Dow has been taken off the work area over holiday weekend.

10 hrs C. Duddy

10 hrs. D. Birn

7.5 M. HART

Page 1 of 1

DAILY FIELD REPORT

Date: 11/25/96

Project #: 109-F2

Project: Dixi Fire Pond
Remediation

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

EnviroClean-Midwest, Inc.

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Notes:



Record of Activities

1330 - Weather conditions are poor. Moderate, steady rain. Slopes steep, soft and clay is very slippery.

Called Valley Material Glass. They scheduled pick up by Tuesday. I told him we may not be here due to rain but I'd call him when we got back on-site. So they could come by. Captain had a tool trailer.

Plan on site @ 1330. Caught in traffic accident on highway. Tool delayed.

1350 - Still raining - harder now.

1400 - Spoke with Jeff Stegman. Decided to put concrete dump back in pit and close it place. Cannot be broken w/ jackhammer. We will clean out sludge.

1410 - Show down due to rain. Too wet to work. Will work Wednesday if stops raining tonight, but unlikely.

1415 - Turned in daily work permit. Let Dan know we were leaving for the day.

1420 - Green Valley called. Said can call Randy Kelly at home Sunday if need truck Monday.

Talked to Rick Cland. Rescheduled loader and dump for Tues. delivery.

Off-site @ 2:30 pm.

Crew 7:30-2:30 + P 2 of 2
3 hr. truck home

DAILY FIELD REPORT

Date: 11/25/96

Project #: 109-72

Project: Day Fire Pond
REMEDICATION

EnviroClean

Site Manager: MTH/RT

Signature: TMH

EnviroClean-Midwest, Inc.

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(614) 433-0886 (Fax)



Notes:

Copied field notes through week ending
11/22/96 and left in Dennis Starnes'
mail box.

Record of Activities

- 0730 - Called Dan No rain. Expelled storms this afternoon and
Thursday & Wednesday.
- 1015 - Drove on-site. Met contractor offering support and
backfill. I asked for a written proposal for ~1000 T
backfill.
- 1030 - Presented daily work permit from Dan Murphy.
Talked w/ Jeff Stegeman. He's going to get final
word on change order today, also he quoted a
memo outlining reasons for change in tonnage of
backfill proposed.
- 1035 - Called Steve Clinton not in office today. Called Extra
Office and left message for him to call back.
- 1145 - Talked to Dan Murphy. Said he would get 400 tons sent by
Steve Clinton to Jeff Stegeman. Packed since had left
fire # up fire while working.
- 1200 - Raining, kept working. Alan left home later than planned so not
on site yet.

Significant Events

Line of ~ 10' of south wall of pit. broken into ~ 30 tons at least, at top.
Top slope with liner is peeled into soil ~ 1 foot. Will
have to be excavated to remove liner.

1230 - Raining harder and steadily.

1/93

HSTAFFISGBETSMSIDFR

Boring - 7.32 - 10¹⁶ ft
Mpx - 7.50 - 10¹⁶ ft
Dm - 7.50 - 10¹⁶ ft

PAGE 102

DAILY FIELD REPORT

Date: 11/22/96

Project #: 109-72

Project: Day Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. HART

Signature: M. Hart

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Notes:

0700 B. Brown, J. Hagan, M. Hart on-site. Tractor trailer of sand/soil delivered and dumped. Off at 7:10am. Obtained work permit for today from DOW.



ERM

B. Brown tightening tracks on the Kobelco. Informed Dan Murphy that we will be transporting soil Monday - Wednesday next week.

Record of Activities

0715 Called back for pay, cash but I don't need it - just remembered.

0805 First truck arrived. No initial paperwork associated with the truck. Called Randy Kelly. Said he didn't know if he wanted any tracking system. I said we insisted on either you landfill without sending the manifests. He said to send trucks off without the paperwork. I told him to send enough for today and three days next week, tracking with the next truck that left you landfill.

0800 BP on-site to fill yard tank and equipment.

Told the truck driver w/ sludge what I called for more paperwork to go without. If you holds him up at the gate, call his supervisor and let him know.

0900 Sent Alan and Chuck to Orlando to pick up Jackhammers and compressor. Not back yet. Arrived at 0800.

Significant Events

0920 BP filled tank & loaded up truck. Off-site.

1015 Valley National Oils in dropped off O₂ tank and took empty one. Randy Kelly showed up with new landfill forms. Since it didn't let him know what we were off until this morning, agreed to pay demurrage on 1 truck that waited

1STAFFISGBETSMSCLDFR

from 9:00 to 10:30 to get loaded and off site.

Alan and Chuck back from rental place. Said the company was slack about safety chains on the vehicle hitch. Make note not to use them again.

n 1 or 3

#509
Concrete

DAILY FIELD REPORT

Date: 11/22/94

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager:

Myer Hart

Signature:

MH

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Notes:



Record of Activities

1240 Sent James to Lunkin. Alan back from getting new tip for jackhammer. Loading trucks.

Randy Kelly called. Requested that concrete blocks be loaded only in Truck #509 (Black 9600 Collins & Sons) since it has a stabilizer. Told Randy I would call him tonight for Monday schedule.

1305 Randy Kelly from landfill called. Trucks are complaining that half road so back they're tearing up trucks. I told him only 1 truck stuck today. They're parked on flat ground. I will try to get some stone on the road if possible. He said okay. I explained what I said. Trucks are getting them up.

1305 Put Chuck in the excavator. James spent > 1 hr at lunch so far.

1345 - Jackhammer is not working efficiently on concrete slurry. Ask Dow if we can decom it and put it back in the Significant Events

hole. otherwise, need to rent a backhoe w/ Ram hoe to break it up.

1350 - Talked to Paul Leibhard. Said soil samples from bottom of pond are clean - non-detect. Also he could be here next week for a "surprise" inspection. We discussed putting concrete back in pond and backfilling. We will hear you idea by Dennis ~~Stephens~~ or Jeff Stegman.

INSTAFFISGBETSIMSCDFR

DAILY FIELD REPORT

Date: 11/22/96

Project #: 109-72

Project: DON FIRE POND
DEMOLITION

EnviroClean

Site Manager: M. HART

Signature: M. Hart

EnviroClean-Midwest, Inc.

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Notes:

1. Call O₃ Art
2. Call fish cash next week

Record of Activities

1350 - Barney home to lunch. Chuck on dozer, James on excavator.

1500 - Alan and Chuck off site. To return compressor and hammer (1.5 hrs to Alhambra & Back to site) + 3 hrs travel

Called Valley Natural - can pick up tanks - they said Monday.

Called Party Kelley - left message to not schedule any trucks for Monday. Will call Monday for Tuesday schedule.

Hast track out. Securing site for weekend. Told Dan Murphy no trucks out for Monday.

Total Sludge today = 295.36 TONS

Total Soil today = 97.54 TONS - All of bottom of pond excavated
and disposed.

Therefore - Total Sludge disposal (transportation/solidif) = 727.81

Significant Events

Alan 7:30 - 7:30 - No lunch = 12 hrs 7.5

Chuck 7:30 - 7:30 - No lunch = 12 hrs 4.5

Myra 7 - 4-7 no lunch = 12.5 includes travel

Barney 7³ 4-7 yes lunch = 11.5 includes travel

James H. 7³ 4-7 yes lunch = 11.5 includes travel

P 7 of 3

DAILY FIELD REPORT

Date: 11/21/96

Project #: 109-72

Project: Day Fire Pond
Remediation

EnviroClean

Site Manager: M. HART

Signature: [Signature]

EnviroClean-Midwest, Inc.

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Notes:

On-site today. Barney Brown, James Hagan,
Myra Hart, Alan Bridges, Chuck Bradley.

Record of Activities

0700 - On-site. First truck here. Raining. Appears to be okay
to haul. D. Stanley issues today's haul permit.

0715 - Four trucks on-site scaled in. First one loaded 730

0730 - Gave a copy of the Cherry Order #1 to Connie Stanley
who said he would make a copy and give you
other copy to Jeff Stegman for signature.

Trucks having a little difficulty getting out of site
pit on the ramp due to rain and slick clay. Barney
taking some time to work on the ramp. Have to pull the
second truck out, re-stabilize sludge so trucks don't
have to go all the way down the ramp.

813 Two more dump trucks on-site.

Significant Events

850 - Loading sixth truck.

915 - Seven trucks total. Waiting on 8th to come. Called
Green Valley to request 4 more trucks this morning. He said he'd
just keep hauling trucks around.

1/93

I:\STAFF\SGB\ETSM\SC1\DFR

DAILY FIELD REPORT

Date: 11/21/96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean

Site Manager: M Hart

Signature: M Hart

EnviroClean-Midwest, Inc.

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Notes:



Record of Activities

930 - Initial Site Visit. Confirmed our impression from yesterday and staffing for Monday.

Spoke with Dennis Stanley. He said he would communicate to Jeff Stegman that we have ~7x the estimated amount of sludge.

1000. Excavating out sump while waiting for trucks. Sump consists of a steel pipe - 3-5' diameter and concrete to ~4' thick. (Photos). Bid says nothing about sump. Choose to remove it since over filled w/ sludge.

Yesterday when I spoke w/ Jeff Stegman, we agreed that the fence that will be put back up after work will need to be moved to utilize road improvements. Dow would relocate fence. EnviroClean will not replace any fence. We agreed what initially ~~was~~ E&G not replacing any fence.

Significant Events

1035 Three more trucks in.

Truck # 510 weighed out and is back to ~~fill up~~ unload. Too heavy just out.

1055 - Truck #510 Back again - 2,000 lbs heavy still.

HSTAFFSGBETSIMSCUDFR

DAILY FIELD REPORT

Date: 11/21/96

Project #: 109-72

Project: DOW FIRE POND
REMEDIALION

EnviroClean

Site Manager: M HART

Signature: JCH

EnviroClean-Midwest, Inc.

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Notes: Weather - rain, sleet, cold, hail

Record of Activities

Talked with Dennis Stanley. He requests that the large iron pipe formerly connected with sewer pipe leading to pond (SE corner of pit) be put in with scrap metal on-site.

1300 - Spoke with Paul Gribhard. Said Analytical will be in Friday afternoon, to discuss soil samples come back okay.

1300 - Alan Brings and Chuck Dudley on-site. Went through HJS planning by DW.

1345 - Truck L 900 - latches not working properly on back gate. Barney having to spend time helping him fix it so Stanley won't fall out back.

1300 - Randy fully called. He has four trucks in route. 1 Hrs to get to landfill so no more trucks leave site after 300. So '7 more truck loads today. Start again tomorrow.

Significant Events

Truck #L 900 - unloading it entirely off site empty c1305.
BACKS Latch.

1310 - Home Hagen Back from lunch. Return Barney.

1335 - Had work planned modified for Pam Murphy for Alan + Chuck

1/03

1:STAFFISGBETSIMSCUDFR

DAILY FIELD REPORT

Date: 11/21/96

Project #: 109-12

Project: Dow Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager:

MHart

Signature: MHart

450 W. Wilson Bridge Road
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(614) 433-0886 (Fax)

Notes:



Record of Activities

1335 - B. Brown cut for lunch. Hagan on excavator loading trucks

Told Steve Lester no way ready to backfill Monday. Delay equipment rental until Monday after Thanksgiving holiday. Relay work since 400 cu ft is a lot more sludge present than estimated.

1430. Plan + check working on cutting pipe in pond, snapping the fence materials.

1500 Last Truck cut today. Not yet finished with sludge removal. Appears to be 1/2 or more tons yet.

Spoke w/ Diane and Jeff Stegeman. They are aware of how much sludge has been hauled off - it's today and how much sludge remains. Today total sludge removal = 480 tons.

Significant Events

Crew continue working on removing scrap metal and moving sludge and soil in fire pond.

1500 - Talked to Green Valley L.L. They say sludge is coming in with the next. I asked to have him send 1 load of sand/soil in the morning.

INSTAFF/SBETS/MISC/DFR

DAILY FIELD REPORT

Date: 11/21/96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean

Site Manager: MHACT

Signature: WCH/ak

EnviroClean-Midwest, Inc.

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Notes:

432.45
Tons off
today, sludge
only

Record of Activities

1315 - Based on weight tickets from Dow, 432.45 tons of sludge hauled today. Called back pond at office. Equipment was cancelled until Dec. 2, Monday after Thanksgiving.

1355 - Spoke with Paul Gibbons and summarized daily events.

1435 - Ordered O₂ & Acetylene for tomorrow delivery @ 10-10:30 am.
Also reserved Jack Hammer & Compressor to be picked up between 8:00 and 9:00 and return by 4:30 pm.

Need jack hammer to break up concrete, soap and drainage pad from NE side of pit corner.

1600 Spoke w/ Dennis Stanley. He said that "they" called EnviroClean offices to get a bill to Riddle a final project costs since they need to get the extra money allocated.

Significant Events

1600 - Crew off-site. Trailor, port-a-potty moved. Fence material - old - all in Dow's soap dump truck.

1/83

Clim 70° - 6°

HSTAFFSGBETSMSICUDFR

DAILY FIELD REPORT

Date: 11/20/96

Project #: 109-72

Project: Dow Fine Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:

Enviroclean - Mys Hart, Barney Brown, James Hagan(On-Site)



Record of Activities

0700 - Crew on-site. One load sand/lust on-site and off-loaded.
0740 - On-site - Randy Keller. Spoke w/ him regarding work. He said approved Dow to dispose soil and sludge. Trucks will come in tomorrow morning. Can call today if we need some more sand/lust. He said that if Dow requires weighing trucks in and out then there will be a demurrage charge. I asked for prices and he said he'd get them to me. He also said he'd talk to Don Murphy regarding scaling trucks. Wants to load 30 T in each tractor trailer. Mr. Keller also said he has sand in Knockfield. Can price to Rick Cloud. Will deliver on-call. Finally, he said he has an articulated dump and track loader #63/953 to rent. Will call me or Steve Weston when needed. I also told Mr. Keller that Dow requires a non-hazardous waste manifest with each truck.

0805 - Copied Daily Field Report through 11/19/96 and placed them in Dennis Stanley's mailbox - WWTP Building.

Significant Events

0900 - Beginning moving sand/lust w/ sludge. M. Hart ad J. Hagan working on fence and dozer pushing when necessary.
BP on-site to feed equipment and fill fuel tank.

1/93

HSTAFFISGBETSIMSCUDFR

DAILY FIELD REPORT

Date: 11/30/96

Project #: 109-72

Project: Dew Fire Pond
Demolition

EnviroClean

Site Manager: MHAKI

Signature: [Signature]

EnviroClean-Midwest, Inc.

450 W Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:



Record of Activities

955 - Called Steve Hester, left message regarding name of yard of eq. Barbin Fish and also shot Randy from Green Valley may have equipment and will call owner price quote.

1005 - Friday delivery of 953 ad dump. Steve Called. Monitor when we can get done at excavation to send to another job.
By Friday.

1020 - Tractor trailer w/ sandblast on site to drop load. Off site @ 1043
1035 - Spoke w/ Rick Cloud (S.C.) let him know of local equipment suppliers.
Give him phone #. Also, I let him know that I have only
one operator (Barney) committed for morning and till used
2-3 months.

1050 - Rick Cloud called. Will confirm backfill price w/ Randy Kelly
and confirm delivery. Cannot commit to quantities at this time.

Significant Events

1155 - Tractor trailer w/ sandblast on site @ 1155. Dump 10 ad. off site @ 1205.
Dump his load w/ trap on trailer. Appears to be damaged. One large hole
on top.

1200 - Called Randy Kelly - asked for 3 loads more sandblast. said he'd try, but may
only be able to get 2 trucks. I said bring what he could.

HSTAFFISGBETSWIMSCIDFR

DAILY FIELD REPORT

Date: 11/20/96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean

Site Manager: MTHay

Signature: JMH

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: Today - Sludge Solidification



Record of Activities

1225. Stan Henton indicated that we appear to have a bit more sludge quantity than originally estimated. Still said to speak w/ Jeff Stegman and make him aware what we must bill by quantities.

1240 - 1340. Paul Gebhard of ERM on-site to collect soil samples.

1245 - Spoke with Jeff Stegman. I told him that estimated quantities of sludge were low, but qnts may almost double because sludge very wet and more than anticipated. I let him know that we could stop anytime until approval - but he said we need to finish work.

1307 - Tractor trailer on-site w/ sandblast. Saved a turtle from the pit. Towed off @ 3:30 (1530)

Spoke w/ Paul Gebhard. I let him know that Monday was the day we plan to start backfilling. And that we need samples run and approval by Friday. He said he'd call lab and determine turnaround time today before he left. I let him know how critical our schedule was.

1530 - Called Randy Kerley. Cancelled last load of sandblast. Also ordered 5 trucks for tomorrow am, staggered ~15 min apart. Also ordered 6 trucks afternoon (1:00pm).

1/93 STAFF SGBETS MISCDFR

DAILY FIELD REPORT

Date: 1/20/96

Project #: 109-72

Project: Dow - FIRE Pond
Remediation

EnviroClean

Site Manager: M. Hart

Signature: MH

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes:

Completed 1 wall of film - 24 exposures

Record of Activities

1530 - Total sand/soil needed to solidify sludge = 88.67 tons
1630 - Paul (whom Off-site collected the four soil samples he
needed for analysis). He said he called the lab and
would have results this week for him if he got the
samples there by tonight. He said he'd call me tomorrow
and Friday.

Benny and Jason are solidifying sludge and cutting a
land road in pit (sample for tests in the
morning).

1645 - Talked w/ Chris Hartford. I will be getting 2 laborers tomorrow
and a truck to complete fence removal activities.
1/2 day and overnight. ~~DELETE~~ hotel room.

1801 - Off-site Turn in Permit to Dow - Daily

Significant Events

* - Solidification complete

* - Fence down

* - ERM Samples obtained.

1/93

Crew 7th an - 6³⁰/pm

I:\STAFF\SGBET\1MISC\DFR

p. 4 of 4

DAILY FIELD REPORT

Date: 11/19/96

Project #: 109-72

Project: Don Fire POND
REMEDIALION

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes: On-site today from E.C.; M. Hart; Barney Brown;
Janee Hagan (On-Site).

Record of Activities

- 0700 - Crew on-site. Obtained work permit from Don Murphy.
1015 - Fence gate near access over has been removed and
stockpiled to be rebuilt by Dow. One fence pole
broken (old fence).
1100 - Called Green Valley Landfill. Randy Kelly said he got the
signed copy of the applic but the sample certif form wasn't
signed. will drop it off again for signature. Let Don Murphy
know to look for it and sign it.
- So T sandblast to be delivered today and EOT delivered
tomorrow morning.
- Diesel fuel to be delivered 11/20/96 am.
- Talked to Steve Shotor. As of yet he hasn't prepared a
charge order for moving the stockpiled soil as
backfill to fire pond. ERM is aware a charge order will
be coming.

Significant Events

- 1300 - Lunch till 1400.
1545 - Tractor trailer of sandblast arrived. Dug at SW end of pond.
1600 - Called Randy Kelly a landfill. Not in. Left a short
message and scheduled to begin moving trucks for disposal
Thursday am.

HSTAFF/SGBETS/MISC/DFR

page 1 of 2

DAILY FIELD REPORT

Date: 11/19/90

Project #: 109-72

Project: Day Five Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M HART

Signature: M HART

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:



Record of Activities

1545 - Sawdust-tractor trailer arrived. Unloaded off site c 1615.
1630 - Talked w/ Steve Heaton will east a D25 D
dump truck and a 955 953B track loader for
backfilling. Will tentatively schedule for Monday
11/25/96 delivery. I will help locate local
source for the equipment.

1640 Called Steve Heaton again said I needed an operator
next week to replace on-site (James Hagen). He said some
guys available - off cascade next week.

1730 - First load sawdust mixed w/ sludge. Cross-over completed.

1755 - Left message w/ Paul Gebhard of EML to come collect a
sample Wed., 20th, afternoon. and will call again tomorrow.

1800 - Paul Gebhard called - will be on-site after 10th to collect samples. Also said
Significant Events

1 - All but ~75 ft of fence down + rolled, stockpiled

1 - Load sawdust delivered + dumped.

1 - Cross-over completed. USED ~ p.20 yds (30 T) of large stone (4").
from site stockpiles. Sludge solidification Begun.

HSTAFFSGBETS/MISCDFR

B. Brown 7-5³⁰

J. Hagen 7-5³⁰

M. Hart 7-5³⁰ (+) P.M. 1 hour

page 2 of 2

DAILY FIELD REPORT

Date: 11/18/96

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean

Site Manager: M. Hart

Signature: [Signature]

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes:

On-site Blay from P.C. - Mynn Hart, Randy Kiser
Barney Brown.

Raining - drizzle. Soil very wet.

Record of Activities

1200 - B. Brown m-site.

1105 - M. Hart m-site Requesting Dow personnel to issue work permit.

1130 - R. Kiser m-site.

1115 - called Green Valley for disposal arrangements.

1115 - Found someone at garage house to issue permit.
Would not take reading of Co. immediately - wanted
until 12 ad he itself could it leave his
position to take Co. reading. No work done.
Down for 45 minutes.

1200 - lunch

1300 - Back from lunch working main pipe. Permit obtained at WWTP.

1410 - Enter south end part of east fence court. B. Brown to cishland
for drain pipe.

Significant Events

1440 - B. Brown return w/ pipe. Don from Dow has application
for waste disposal at Green Valley. He says he will
sign it, leave at the guard house, and call somebody
to come to pick it up.

1800 - fed loof, bassett
every grade here \$65 + Grade

DAILY FIELD REPORT

Date: 11/18/96

Project #: 109-72

Project: Down Fire Pond
Remediation

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

EnviroClean-Midwest, Inc.

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)



Notes:

Record of Activities

1630 - Most of west fence down. Putting up interior fence.

James Hagen from misc site here at 7:00 am. to replace
roster.

1700 - Site secured.

thus today

B. Brown Travel = 3.0 hrs; on-site 7:00 - 5:15

R. Kiser Travel = 3.0 hrs; on-site 11:30 - 5:15

M. Hart Travel = 3.0 hrs; on-site 11:00 - 5:15

1705 Spoke w/ Paul Lebold of ERM to review
work to date. Will keep him posted.

Significant Events

* 30" drain pipe in place and secured.

* South end portions of east and west fence down.

* Disposal applications will now to be turned over to Green Valley
baseball.

page 2 of 2

DAILY FIELD REPORT

Date: 11/15/96

Project #: 109-72

Project: Dry Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: On-site today w/E.C.-M.Hart; R.Kisor, J.Carpenter;
Barney Brown - Foreman



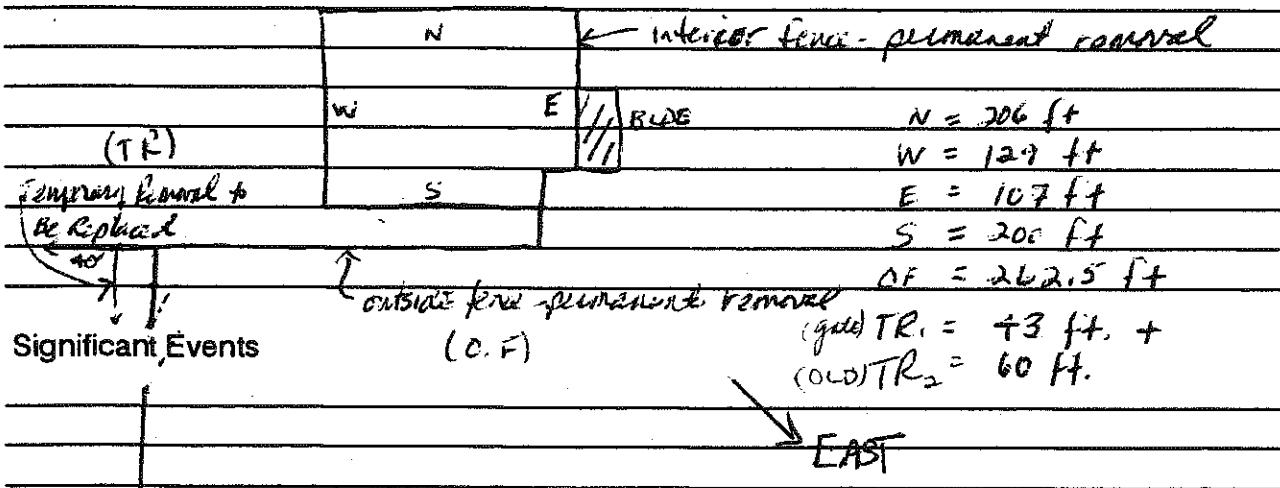
Record of Activities

0645 - M.Hart on-site

0700 - Crew on-site, obtained Permit for fence removal for hot work, and sample collection.

0715 - Begin taking down outside perimeter fence - south side. Using acetylene torch to cut posts at ground surface

0830 - Measured fence to be taken down. (see diagram)



Significant Events

1/83

Total fence removal = $206.5 \text{ ft} + 129 \text{ ft} - \text{gate temp removal}$
 $\approx 334.5 \text{ ft} - \underline{\text{not}}$

1/STAFFISGBETSIMISCIDFR

Total fence removed including temporary salvaged
part of 2 = 107.50 feet

DAILY FIELD REPORT

Date: 11/15/92

Project #: 109-72

Project: Dow Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. Hart

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes:



Record of Activities

0900 - Paul arrived on-site to collect sample. Sent J. Carpenter to get drain pipe (Ashland) and more acetylene and co. for torch (Washington).

1000 - Sample could not be collected. Sludge too wet at bottom. At least 3 additional feet at bottom of pit. Paul off-site @ 1000. Basney ad Rush continue to work on fence removal.

1220 - Lunch break. 14 - :12

1345 - KOBELCO arrives from NIMOR. Off-loaded.

1425 - outfit perimeter fence - 262.5 ft - down, rolled and stacked on slope.

1430 - Unloading 1 ton of drain pipe - 24" - 20' and fuel tank. place drain pipe in ditch.

1445 - Received work permit extension until 6:00 by DOW.

1600 - South fence down approx 3/4. Begin cleaning up job site and place stakes for "caution" tape around fire pond.

Significant Events

1630 - Crew off-site. Ending @ 1630; Mgr. Darryl J. H. @ 1630

p 2 of 2

15-X

DAILY FIELD REPORT

Date: 11-14-96

Project #: 109-72

Project: DOW Fire Pond
Remediation

EnviroClean-Midwest, Inc.

EnviroClean

Site Manager: M. HART

Signature: M. Hart

450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Notes: On-site today: M. Hart; R. Kisor; J. Carpenter; Barney B.



Record of Activities

1600: Crew on-site. R. Kisor and J. Carpenter taking H+S course through Dow.

1605: First truck w/ #305 stone - dumped and delivered.

1610: M. Hart - checked in with Dennis Stanley and Jeff Stegman. We offered to doze soil out of way for trucks. Dan offered a b" stone material to use for crossover improvement.

1630: Shoved crew around fire pond area. Went over plan for the week, H+S issues and work strategies. Set-up tool trailers in parking lot across from fire pond - okay w/ Dow.

1645: Second truck (25 tons) w/ #4 stone - dumped and delivered.

1705: Crew signed out - off-site. To hotel in Portland.

Significant Events

50 tons stone delivered

D5 also on-site when we arrived.

DAILY LOG REPORT FORM

DATE: / /

DAY (circle): S M T W T F S

EnviroClean-Midwest, Inc.
450 West Wilson Bridge Rd.
Columbus, OH 43085

Site Supervisor
Client:
JOB #

PAGE ____ OF ____ PAGES

INCLUDE THE FOLLOWING INFORMATION

- PROGRESS OF CONSTRUCTION (WORK BY ALL CONTRACTORS)
- EXCEPTIONS/UNUSUAL CONDITIONS NOTED BY SITE SUPERVISOR
- SAMPLING EVENTS
- REQUEST FOR CHANGES IN METHOD OR SCOPE (CHANGE ORDERS)
- MATERIAL AND/OR EQUIPMENT DELIVERED TO SITE
- AND SPECIFIC DIRECTIONS RECEIVED FROM CLIENT
- CONFINED SPACE ENTRY
- REPRESENTATIVE OR REGULATING AGENCY, CONTACT, PHONE #
- PERMITS
- MEETING HELD WITH CLIENT AND SUBJECT MATTER
- WORK AND SERVICES PERFORMED TODAY
- PLANNED ACTIVITIES FOR SUBSEQUENT DAY
- BY SUBCONTRACTORS
- DOCUMENTS PREPARED BY/RECEIVED /SUBMITTED

SAFETY MEETING TOPIC(S):

TIME	ITEM

WEATHER CONDITIONS:

TEMP. (MIN./MAX)

SUPERVISOR SIGNATURE:

WORKER EXPOSURE HOURS FOR THIS DATE:

RAINFALL: INCHES

#PERSONNEL: FOR HRS:

**Environmental Resources Management, Inc.**

855 Springdale Drive
Exton, Pennsylvania 19341
(610) 524-3500

Please Remit To:

Environmental Resources Management, Inc.
P.O. Box 8500 (S-9345)
Philadelphia, PA 19178-9345

FEBRUARY 10, 1997
INVOICE NO. 28366
PROJECT NO. 78022.00

THE DOW CHEMICAL COMPANY
925 COUNTY ROAD 1A
IRONTON, OH 45638
ATTN: MR. DENNIS STANLEY

FOR:-FIRE WATER POND CLOSURE

PROFESSIONAL SERVICES FOR THE PERIOD ENDING JANUARY 31, 1997

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
CAMP. BILL	5.5	150.00	825.00
GEBHARD, PAUL	11.5	88.00	1,012.00
TOTALS	17.0		1,837.00
		TOTAL LABOR	1,837.00

REIMBURSABLE EXPENSES

COMPANY VEHICLE USAGE	76.57
COMPUTER	20.00
TELEFAX CHARGES	117.00
TOTAL REIMBURSABLES	213.57

TELEPHONE

2% OF LABOR OF \$1,837.00	36.74
---------------------------	-------

TOTAL THIS INVOICE \$ 2,087.31

=====

APR 16 '97 08:42AM 517 638 4115 NAPASC

610 524 3733 TO 915176584115

P/W/M
APR 14 '97 01:34PM

Environmental Resources Management, Inc.

855 Springdale Drive
Exton, Pennsylvania 19341
(610) 524-3500

Please Remit To:

Environmental Resources Management, Inc.
P.O. Box 8500 (5-9345)
Philadelphia, PA 19178-9345

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TOTALS.	17.0		1,837.00
		TOTAL LABOR	1,837.00

REIMBURSABLE EXPENSES

COMPANY VEHICLE USAGE	78.57
COMPUTER	20.00
TELEFAX CHARGES	117.00
TOTAL REIMBURSABLES	213.57

TELEPHONE
2% OF LABOR OF \$1,837.00

TOTAL THIS INVOICE \$ 2,087.31

OK Done SSJ

Account 221120

355 East Campus View Blvd.
Suite 250
Columbus, Ohio 43235
Phone: (614) 848-4494
Fax: (614) 433-0886

December 24, 1996

Mr. Dennis Stanley, CEA, PEA
Environmental Compliance Leader
The Dow Chemical Company
Hanging Rock Plant
925 County Road 1A
Ironton, OH 45638



File Number: 109-72

Subject: November Invoice #893401

Dear Mr. Stanley:

Attached is EnviroClean-Midwest, Inc.'s Invoice #893401 in the amount of \$130,295.67 for work performed at the Dow facility from 11/2/96 through 11/30/96.

The specific work tasks conducted during the November invoice period and the costs associated with each task are listed on the attached Table 1.

Please note that the final quantities for sludge solidification, excavation, transportation and disposal and soil excavation, transportation and disposal are based on landfill weight tickets. A copy of the landfill weight tickets will be made available to you upon request.

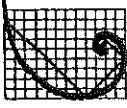
If you have any questions regarding this invoice, please call me at (614) 848-4494.

Sincerely,

A handwritten signature in black ink, appearing to read "Myra L. Hart".

Myra L. Hart, C.P.G.
Project Manager

Attachments

**ERM**

EnviroClean-Midwest, Inc.
450 W. Wilson Bridge Road
Columbus, OH 43085
(614) 848-4494
(614) 433-0886 (Fax)

Invoice

ERM/ENVIROCLEAN-MIDWEST, INC.
355 E. CAMPUS VIEW BLVD.
SUITE 250
COLUMBUS, OH 43235
(614) 848-4494

DATE 12-23-96
NUMBER 893401
JOB 1097201
CUST. 10901 ERM-INC.

TO:
ERM-INC.
855 SPRINGDALDE DRIVE
EXTON, PA 19341

JOB SITE:
DOW FIRE POND CLOSURE
925 CR 1A
IRONTON, OHIO 45638
ERM-INC.

Item	Description	Amount
	BILLING FOR 11/02/96 - 11/30/96	
1	LUMP SUM FOR PROFESSIONAL SERVICES:	130,295.67

TERMS: Payable Upon Receipt

REMIT PAYMENT TO: EnviroClean-Midwest, Inc. ♦ PO Box 627 ♦ Delaware, OH 43015-9990

(614) 848-4494 ♦ Telefax: (614) 433-0886

An affiliate of The Environmental Resources Management Group with offices worldwide

Mr. Dennis Stanley, CEA, PEA

File Number 109-72

December 24, 1996

Page 2

TABLE 1

	<i>Item</i>	<i>Unit</i>	<i># Units</i>	<i>Cost/Unit</i>	<i>Total Cost</i>	<i>% Complete</i>
1	Construction Mobilization	LS	1	\$5,200.00	\$5,200.00	100
2	Fence Removal	LF	1150	\$2.00	\$2,300.00	100
4	Cross Over Improvement	LS	1	\$2,300.00	\$2,300.00	100
5	Sludge Solidification	Ton	722.39	\$31.30	\$22,610.81	100
6	Sludge Excavation	Ton	722.39	\$81.00	\$58,513.59	100
7	Sludge Transportation	Ton	722.39	\$6.13	\$4,428.25	100
8	Sludge Disposal	Ton	722.39	\$30.00	\$21,671.70	100
10	Soil Excavation	Ton	97.17	\$21.00	\$2,040.57	12
11	Soil Transportation	Ton	97.17	\$6.13	\$595.65	12
12	Soil Disposal	Ton	97.17	\$30.00	\$2,915.10	12
19	Disposal Characterization	LS	1	\$2,040.00	\$2,040.00	100
20	Below Liner Sampling & Analysis	LS	1	\$5,680.00	\$5,680.00	100
	TOTAL				\$130,295.67	

Peter Baumer
David Duppree
Bob Walker
Gary Veurink
David Schaffer

CC Terry Cox
Ken Stevick
Ben Baker
Carl Darling
Kevin Johnson

SUBJECT: REQUEST FOR ADDITIONAL CAPITAL

The purpose of this letter is to make you aware of a cost overrun on Expense project 221120, and to request an additional \$80M to complete the project. A contribution of \$20M from each of the businesses will be needed. The project was originally authorized for \$150M. This expense project involves the remediation of the Site Fire Water Pond. If you recall this was agreed to with U.S. EPA as a Supplemental Environmental Project to reduce the BIF fine agreed to in September.

The Project to remediate the Fire Pond was awarded to Environmental Resources Management Inc. (ERM) out of West Virginia. The project involves the following items.

- Fence Removal
- Sludge Solidification
- Sludge Excavation
- Sludge Transportation and Disposal
- Liner Removal and Disposal
- Soil Excavation
- Soil Transportation and Disposal
- Back fill and Final Grading with Gravel Final Cover

The cost overrun has occurred in the Sludge Solidification, Excavation, Transportation and Disposal phase. The original authorization was based on the assumption of 6 inches of sludge depth. When the contractor began moving equipment into the pond bottom the sludge was found to be much deeper, approximately 3 ft. The sludge would not dewater itself as anticipated so a drying agent (sawdust) needed to be introduced. This also increased the amount of material to be landfilled.

80 tons of sludge was anticipated to be removed from the pond. The actual amount removed was **728 tons**.

We regret any inconvenience that this may cause. Any such projects in the future will include physical measurements in the field prior to soliciting bids.

For any additional information concerning this cost overrun contact either Dennis Stanley at 614-533-4035 or Jeff Stegman at 614-533-4064.

Regards

12-05-96 04:02PM FROM ERM COLUMBUS, OH

TO 916145334232

P001/003

Facsimile

To: Jeff Stegman
Company: Dow
Fax number: (614) 533-4232
From: Myra Hart
File number: 109-72
Date: 12/5/96
Number of pages: 3 including cover sheet

EnviroClean-Midwest

355 E. Campus View Blvd.
Columbus, Ohio 43235
(614) 433-7900
(614) 433-0886 (fax)



ERM

PRIVILEGE AND CONFIDENTIALITY NOTICE

This message is intended only for the use of the individual(s) to whom it is addressed and may contain information that is privileged and/or confidential. If the reader of this message is not the intended recipient or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately at (610) 524-3500 and return the original message to us at the address above via the U. S. Postal Service. Thank you.

Memorandum

Environmental
Resources
Management, Inc.

To: Jeff Stegman
From: Myra Hart
Date: 12/5/96
Subject: Fire Pond Soil and Backfill Quantities



The purpose of this memo is to estimate the additional quantity of soil to be excavated, transported and disposed based on the actual measured dimensions of the outside boundaries of the pond liner. The measured outside dimensions of the liner are 190 feet by 130 feet. The liner stretches over the berm approximately 4 feet from the inside edges of the pond (measured dimensions, Dow 12/4/96, 183x122) and is keyed into the soil approximately 1.5 feet. Original engineering drawings provided by Dow do not show the liner construction detail. In order to remove the liner and 6 inches of soil beneath as required, approximately 143 cubic yards or 215 tons of additional soil must be removed. Final quantities of soil for excavation, disposal and transport will be based on landfill weight tickets and billed at the rates listed in the revised Schedule of Values in Change Order #1 dated November 20, 1996.

Change Order #1 reflects Dow's request to use soil stockpiled on-site for backfill. On December 4, 1996, Dow requested that most of the available, dry soil not be used; it has been committed to other site projects. The remaining soil is saturated due to recent rainfall and cannot be used for backfilling. As a result, approximately 4,050 tons of off-site backfill material will be purchased.

Additional material will likely be needed to account for variations in soil type and compactive nature, moisture content, and estimations of quantities of material available and accessible from berms. We will keep you informed of the quantities of backfill material purchased on a daily basis.

Final quantities of backfill material will be based on vendor weight tickets and billed at the rate listed in the revised Schedule of Values in Change Order #1 dated November 20, 1996. In addition, Dow will be billed for labor, equipment and material expenses incurred by initiating and performing partial backfill relocation activities, approximately \$7,230.00.

As a final note, Dow mentioned in our meeting on December 4, 1996 that they may not want to place the 6 inches of gravel over the fill material.

12-05-96 04:02PM FROM ERM COLUMBUS, OH

TO 916145334232

P003/003

P A G E 2

Gravel will be used to backfill the concrete vault located adjacent to the fire pond. Final quantities of gravel will be based on vendor weight tickets and billed at the rate listed in the revised Schedule of Values in Change Order # 1 dated November 20, 1996.

If you have any questions or require additional information, I will be available on-site, at (614) 581-1018 (mobile) or (614) 431-6320 (office).

355 East Campus View Blvd.
Suite 250
Columbus, Ohio 43235
Phone: (614) 848-4494
Fax: (614) 433-0886
C14-842-667

January 27, 1997

Mr. Dennis Stanley, CEA, PEA
Environmental Compliance Leader
The Dow Chemical Company
Hanging Rock Plant
925 County Road 1A
Ironton, OH 45638



File Number: 109-72

Subject: December Invoice #893421; DOW Purchase Order #63088326

Dear Mr. Stanley:

Attached is EnviroClean-Midwest, Inc.'s Invoice #893421 in the amount of \$149,106.56 for work performed at the Dow facility from December 1, 1996 through December 27, 1996. The specific work tasks conducted during the December invoice period and the costs associated with each task are listed on the attached Table 1.

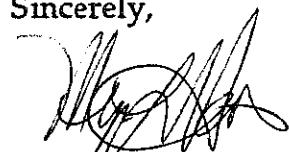
Please note that the final quantities for backfill material, gravel and top soil are based on vendor weight tickets. A copy of weight tickets will be made available to you upon request.

Also, please be aware that you were and will continue to be billed directly by ERM, Inc. for work related to line items #20 and 21. Since EnviroClean also billed Dow last month for line item #20, we have issued a credit this month, as shown in Table 1.

Mr. Dennis Stanley, CEA, PEA
File Number 109-72
January 27, 1997
Page 2

If you have any questions regarding this invoice, please call me at (614)
848-4494.

Sincerely,



Myra L. Hart, C.P.G.
Project Manager



Attachments

ERM/ENVIROCLEAN-MIDWEST, INC.
355 E. CAMPUS VIEW BLVD.
SUITE 250
COLUMBUS, OH 43235
(614) 848-4494

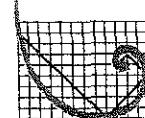
DATE 1-20-97
NUMBER 893421
JOB 1097201

355 East Campus View Blvd.
Suite 250
Columbus, Ohio 43235
Phone: (614) 848-4494
Fax: (614) 433-0886

TO:
ERM-INC.
855 SPRINGDALDE DRIVE
EXTON, PA 19341

JOB SITE:
DOW FIRE POND CLOSURE

BILLING FOR 12/01/96 - 12/27/96

 **ERM** Amount

LUMP SUM FOR PROFESSIONAL SERVICES:

149,106.56

TABLE 1

	<i>Item</i>	<i>Unit</i>	<i># Units</i>	<i>Cost/Unit</i>	<i>Total Cost</i>	<i>% Complete</i>
9	Liner Removal	LS	1	\$7,500.00	\$7,500.00	100
10	Soil Excavation	Ton	713.83	\$21.00	\$14,990.43	100
11	Soil Transportation	Ton	713.83	\$6.13	\$4,375.78	100
12	Soil Disposal	Ton	713.83	\$30.00	\$21,414.90	100
13	Backfill and Compaction	LS	1	\$25,000.00	\$25,000.00	100
14	Backfill Relocation	LS	1	\$7,230.00	\$7,230.00	100
15	Backfill Material	Ton	11,011.87	\$6.16	\$67,833.12	100
16	Gravel	Ton	60.74	\$11.84	\$719.16	100
17	Topsoil	Ton	543.89	\$7.20	\$3,916.01	100
18	Erosion Control	LS	1	\$1,760.00	\$1,760.00	100
20	Below Liner Sampling & Analysis	LS	1	-\$(\$5,632.84) See Note 1	-\$(\$5,632.84) See Note 1	100
21	Project Management & Reporting	LS	1	See Note 1	See Note 1	
	TOTAL				\$149,106.56	

Note 1. For Line Items 20 and 21:

\$5,680.00 billed by EnviroClean, Invoice #893401.

\$5,193.84 billed by ERM, Invoices #26457 and #26943.

\$8,100.00 Estimated Total Invoice amount from ERM for 12/96 and 1/97.

Total ERM and EnviroClean Invoices for Items 20 and 21 = \$18,973.84.

Total Price for Items 20 and 21 = \$13,341.00.

Credit to DOW = \$5,632.84.

200,000

277,000

**Environmental Resources Management, Inc.**

855 Springdale Drive
Exton, Pennsylvania 19341
(610) 524-3500

Please Remit To:

Environmental Resources Management, Inc.
P.O. Box 8500 (S-9345)
Philadelphia, PA 19178-9345

JANUARY 22, 1997
INVOICE NO. 28138
PROJECT NO. 78022.00

THE DOW CHEMICAL COMPANY
925 COUNTY ROAD 1A
IRONTON, OH 45638
ATTN: MR. DENNIS STANLEY

FOR:-FIRE WATER POND CLOSURE

PROFESSIONAL SERVICES FOR THE PERIOD ENDING DECEMBER 31, 1996

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
CAMP, BILL	9.0	150.00	1,350.00
GEBHARD, PAUL	15.5	88.00	1,364.00
GILLISPIE, IVAN	5.0	49.00	245.00
TOTALS	29.5		2,959.00
		TOTAL LABOR	2,959.00

CONSULTANTS

ANALYTICAL SERVICES	
AP 13111 12/31 CT&E ENVIRONMENTAL	1.872.00
1211558	
TOTAL CONSULTANTS	1.872.00
PROFESSIONAL SERVICES TOTAL	4.831.00

REIMBURSABLE EXPENSES

COMPANY VEHICLE USAGE	73.47
COMPUTER	195.00
AUTO/VAN RENTAL	28.75
AIR TRANSPORTATION	115.00
MEALS	5.65
SUPPLIES	10.52
TOTAL REIMBURSABLES	428.39



Environmental Resources Management, Inc.

855 Springdale Drive
Exton, Pennsylvania 19341
(610) 524-3500

Please Remit To:

Environmental Resources Management, Inc.
P.O. Box 8500 (S-9345)
Philadelphia, PA 19178-9345

INVOICE NO. 28138
PROJECT NO. 78022.00

TELEPHONE

2% OF LABOR OF \$2,959.00

59.18

TOTAL THIS INVOICE \$ 5,318.57

=====



Environmental Resources Management, Inc.

855 Springdale Drive
Exton, Pennsylvania 19341
(610) 524-3500

Please Remit To:

Environmental Resources Management, Inc.
P.O. Box 8500 (S-9345)
Philadelphia, PA 19178-9345

DECEMBER 6, 1996
INVOICE NO. 26943
PROJECT NO. 78022.00

THE DOW CHEMICAL COMPANY
925 COUNTY ROAD 1A
IRONTON, OH 45638
ATTN: MR. DENNIS STANLEY

FOR:-FIRE WATER POND CLOSURE

PROFESSIONAL SERVICES FOR THE PERIOD ENDING NOVEMBER 30, 1996

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
CAMP, BILL	6.0	150.00	900.00
GEBHARD, PAUL	23.5	88.00	2,068.00
TOTALS	29.5		2,968.00
		TOTAL LABOR	2,968.00

TELEPHONE

2% OF LABOR OF \$2,968.00	59.36
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TOTAL THIS INVOICE	\$ 3,027.36
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CHANGE ORDER #1

November 20, 1996

Reason for Change:

There are two change conditions which effect this project.

1. The backfilling of the Fire Pond was to be accomplished by using existing material from the pond banks and pulling it into the excavation and by the purchase of additional fill material. It was estimated that approximately 4050 tons of additional fill material would need to be purchased and transported to the site in order to backfill the Fire Pond. Dow has generate a soil pile near the Fire Pond from other excavation activities and has requested EnviroClean use this material as backfill. Our original proposal dated 05/17/96 did not include the transport of on-site fill to the excavation. It anticipated suppliers trucks dumping backfill into the Fire Pond for EnviroClean to spread and compact with the dozer. EnviroClean will mobilize additional equipment (25 ton off road dump truck, and tracked front end loader) and personnel (2 equipment operators) to the site to complete the transfer of the existing borrow to the Fire Pond.
2. The prices quoted in our proposal dated 05/17/96 were good for 60 days from the date of the proposal. The price of backfill material has increased due to price increases from local vendors. Should backfill material need to be purchased the unit price for material and delivery is \$ 6.16 per ton.

Deduction: \$ 16,767.00 for purchase of 4050 tons of backfill material.

Addition: \$ 3,080.00 to reflect the increase in cost of delivered off-site backfill to \$ 6.16 per ton. Assumes a quantity of 500 tons.

Addition: \$ 16,700.00 Lump Sum price to move backfill from on-site borrow source adjacent to Fire Pond. We assume the transfer of backfill not take more than 5 workdays to complete.

11-20-96 02:42PM FROM ERM COLUMBUS, OH

TO 916145746398

P003/008

Unit price quantities will be based upon field measurements (e.g. length of fence removed) or vendor weight tickets (e.g. weigh tickets for tons of backfill purchased or tons of solid waste or sludge transported and disposed). Copies of weight tickets will be provided as invoice back-up documentation.

For The Dow Chemical Company:

Approved

Name

Title

Date

For ERM EnviroClean-Midwest, Inc.:

Accepted

Name

Title

Date

11-20-96 02:42PM FROM ERM COLUMBUS, OH

TO 916145746398

P004/008

Dow Fire Pond Remediation**Schedule of Values****Updated: 11/20/96**

Item	# of Units	Units	Cost/Unit	Extension
1 Construction Mobilization	1	LS	\$ 5,200.00	\$ 5,200.00
2 Fence Removal	1150	LF	\$ 2.00	\$ 2,300.00
3 De-Water Lagoon	1	LS	\$ 6,200.00	\$ 6,200.00
4 Cross Over Improvement	1	LS	\$ 2,300.00	\$ 2,300.00
5 Sludge Solidification	80	Ton	\$ 31.30	\$ 2,504.00
6 Sludge Excavation	80	Ton	\$ 61.00	\$ 4,880.00
7 Sludge Tranportation	80	Ton	\$ 6.13	\$ 490.40
8 Sludge Disposal	80	Ton	\$ 30.00	\$ 2,400.00
9 Liner Removal	1	LS	\$ 7,500.00	\$ 7,500.00
10 Soil Excavation	420	Ton	\$ 2.00	\$ 8,400.00
11 Soil Transportation	420	Ton	\$ 6.13	\$ 2,574.60
12 Soil Disposal	420	Ton	\$ 30.00	\$ 12,600.00
13 Backfill & Compaction	1	LS	\$ 10,000.00	\$ 10,000.00
14 Backfill Relocation	1	LS	\$ 16,700.00	\$ 16,700.00
15 Backfill Material	500	Ton	\$ 6.16	\$ 3,080.00
16 Gravel	400	Ton	\$ 11.84	\$ 4,736.00
17 Disposal Characterization	1	LS	\$ 2,040.00	\$ 2,040.00
18 Below Liner Sampling & Analysis	1	LS	\$ 5,680.00	\$ 5,680.00
19 Final Report & Project Management		LS	\$ 5,550.00	\$ 5,550.00
Total				\$ 107,155.00
Base Contract Amount				\$ 104,262.00
Change Orders				
1 Backfill Relocation & Purchase				\$ 2,893.00
New Contract Amount				\$ 107,155.00

Bold & Italics for Items #14 & #15 reflect the impact of Change Order #1**NOTE: All unit price invoicing quantities are based upon actual vendor weight tickets or field measured quantities.**



Environmental Resources Management, Inc.

855 Springdale Drive
Exton, Pennsylvania 19341
(610) 524-3500

Please Remit To:

Environmental Resources Management, Inc.
P.O. Box 8500 (S-9345)
Philadelphia, PA 19178-9345

NOVEMBER 11, 1996
INVOICE NO. 26457
PROJECT NO. 78022.00

THE DOW CHEMICAL COMPANY
925 COUNTY ROAD 1A
IRONTON, OH 45638
ATTN: MR. DENNIS STANLEY

FOR:-FIRE WATER POND CLOSURE

PROFESSIONAL SERVICES FOR THE PERIOD ENDING OCTOBER 31, 1996

PROFESSIONAL PERSONNEL

	HOURS	RATE	AMOUNT
CAMP, BILL	8.0	150.00	1,200.00
CART, TIMOTHY	10.0	80.00	800.00
GEBHARD, PAUL	0.5	88.00	44.00
POWELL, JOAN	1.0	80.00	80.00
TOTALS	19.5		2,124.00
		TOTAL LABOR	2,124.00

TELEPHONE

2% OF LABOR OF \$2,124.00	42.48
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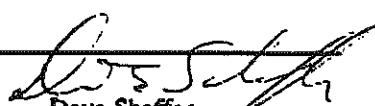
TOTAL THIS INVOICE	\$ 2,166.48
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DOW CONFIDENTIAL
AUTHORIZATION REQUEST

The Dow Chemical Company

GLOBAL BUSINESS:		VALUE CENTER:			
TITLE: Hanging Rock Fire Pond Closure		AUTH. NO.: 221120	LOCATION: Hanging Rock	DATE: 09/30/96	REVISED:
		SPONSOR: Dennis Stanley		RTO:	
PROPOSAL SUMMARY:					
<p>Closure of the Hanging Rock Fire Water Pond as part of an agreement with the United States EPA, Region V involving the voluntary remediation of the Pond for credits toward the Styron/Magnum BIF penalties. This Closure Plan is a Site project and will be funded as an Expense Project.</p>					
		1996	1997	1998	1999
Capital Spending (\$M)		150			2000
PROPOSAL RESOURCES: DIRECT		OTHER RESOURCES:		RELATED & ADDTL AUTHS.:	
FIXED CAPITAL	USSM	ALLOCATED CAPITAL:	USSM		
THIS REQUEST		FIXED (Related Auth)			
PREVIOUSLY AUTHORIZED		WORKING CAPITAL			
TOTAL PROPOSAL		EXPENSES:			
LOCAL CURRENCY UNITS:		START-UP			
THIS REQUEST		OTHER	150		
PREVIOUSLY AUTHORIZED		PEOPLE CHANGE	MFG		
TOTAL PROPOSAL		(# PEOPLE)	R&D		
			MKT		
BENEFITS OF THIS PROPOSAL:					
<p>This project will allow the Site to Close the Old Fire Water Pond while obtaining credits toward the BIF penalties imposed on Styron/Magnum by the USEPA.</p>					
ALTERNATIVES CONSIDERED:					
RISK AND SENSITIVITIES:					
<p>The scope of the project is based on the assumption that the soil below the Pond liner does not contain significant contamination. If significant contamination is detected, the contracting firm handling the closure (ERM), will inform Dow and propose a sampling plan for further characterization.</p>					
PROPOSAL'S VALUE CREATION		GLOBAL VALUE CENTER:		PROJECT TYPE	
Prepared by:		CUMULATIVE ECONOMIC PROFIT			
		NPV (\$MM)	HISTORY (\$MM)	FORCAST (\$MM)	
DCI%		@10.75%	19xx-19xx	0-5 yrs	6-10 yrs
EXECUTIVE DEPARTMENT USE		DATE:		BOARD NO.:	
SECRETARY:		CEO			

DOW CONFIDENTIAL
AUTHORIZATION REQUEST APPROVAL
The Dow Chemical Company

GLOBAL BUSINESS:	VALUE CENTER			
TITLE: Hanging Rock Fire Pond Closure	AUTH. NO.: 221120 LOCATION: Hanging Rock SPONSOR: Dennis Stanley	DATE: 09/30/96 REVISED: RTO:		
BUSINESS DIRECT		NAME	EMPL. NO	DATE
GROUP VP				
GLOBAL BUSINESS VP				
BUSINESS DIRECTOR/MGR.				
BUSINESS MFG DIRECTOR/MGR.				
MFG LEADER				
SITE MANAGER CONCURRENCE (OR DELEGATE)				
<u>INDIRECT (Site Infrastructure)</u>				
GLOBAL FUNCTION VP				
AREA PRESIDENT				
AREA FUNCTION MGR.				
SITE MANAGER	 <u>Dave Shaffer</u>			
LEGAL (1)				
BY: (2)				
Return completed authorization package to Corporate Capital Planning or Site/Area Capital Planning.				
(1) >\$2,000M requires legal review. Corporate Capital Planning will obtain. (2) Authorizing electronic signature above confirmed by E-mail according to Dow Controllers policy.				

May 17, 1996

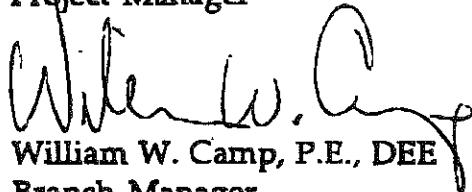
Page 9

ERM appreciates the opportunity to submit this proposal and looks forward to working with you on this project. Furthermore, if you have any questions concerning this proposal please give us a call at 304-757-8017.

Sincerely,



Timothy B. Cart, P.E.
Project Manager

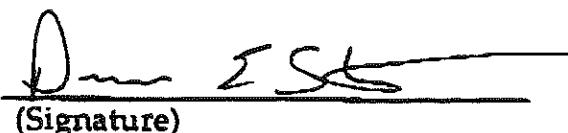
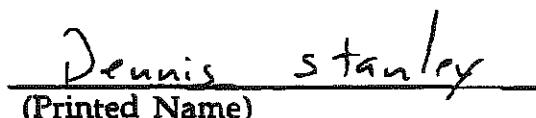


William W. Camp, P.E., DEE
Branch Manager

ACCEPTANCE OF PROPOSAL

If this proposal is acceptable to you, please indicate your agreement by having an authorized officer sign this proposal in the space provided below and by returning to the designated ERM office the executed copy of this proposal, or by issuing a Purchase Order. On receipt of the acceptance copy or Purchase Order, we will commence the performance of the services described in this proposal.

Agreed and Accepted By:


(Signature)
(Printed Name)

Environmental Compliance Leader 10/3/96
(Title) (Date)

Please return signed acceptance to:

Environmental Resources Management, Inc.
Attention: Tim Cart
600 A Prestige Park
Hurricane, WV 25526



DOW CHEMICAL U.S.A.
An Operating Unit of the Dow Chemical Company
U.S.A. Accounts Payable
2020 Willard H. Dow Center
Midland, Michigan 48674

VOUCHER REQUEST

2020 Willard H. Dow Center Midland, Michigan 48674		VENDOR CODE	PURCHASE ORDER	DATE Oct 1, 1996
REQUEST PAYMENT TO	NAME Treasurer of the United States of America			
	ADDRESS-STREET US EPA, Region 5, Regional Finance Office			
	CITY P.O. Box 70753,	STATE Chicago IL 60673	ZIP CODE	
	ATTENTION:			

MESSAGE ON CHECK STUB							
Docket Number V-W-001-95							
REASON/PURPOSE OF PAYMENT							
<u>Civil Penalty</u>							
VOUCHER DISTRIBUTION							
AMOUNT	LEDGER (5)	COST CENTER (7)	SUB FUNCT. (3)	SUFFIX (3)	AXT (2)	SOURCE 1 (13)	SOURCE 2 (7)
7 4 8 1 9 5 0		9873					
7 4 8 1 9 5 0		9874					
\$149,639.00	TOTAL AMOUNT						

DUE DATE OR TERMS		<input type="checkbox"/> ATTACHMENTS (Check if Yes)
AUTHORIZED SIGNATURE - FULL NAME <i>[Signature]</i>		
DEPARTMENT	PHONE NO.	MASTER NO.
Hanging Rock Site Manager	(815) 423-2600	507084

CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis ReportDon Murphy
DOW CHEMICAL COMPANY USALaboratory Number 296-10-0061-000 Respectfully
Submitted:FIRE POND GRAB
OLD FIRE PDNDDate Sampled 10/02/96
Date Received 10/02/96

Sampled by CLIENT

R101496 1636

ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED	
					DATE/TIME	ANALYST
BOD (five day)	49	2	mg/L	SM5210B	10/02/96 13:20	RRS **
Total Suspended Solids(Non-Filt.Residue)	26	5	mg/L	EPA160.2	10/03/96 10:00	MHS
Total Dissolved Solids(Filt.Residue)	1400	5	mg/L	EPA160.1	10/03/96 11:00	MHS
Copper [Cu] (total)	0.042	0.020	mg/L	EPA200.7	10/03/96 14:53	MA
Zinc [Zn] (total)	0.33	0.020	mg/L	EPA200.7	10/03/96 14:53	MA
Oil & Grease (gravimetric)	20	2	mg/L	EPA413.1	10/10/96 07:00	TB
Specific Conductance (lab)	2500	---	µhos	EPA120.1	10/03/96 14:30	MHS
Total Organic Carbon	21	1	mg/L	EPA415.1	10/10/96 15:50	CF

Method Reference SM: Standard Methods For The Examination Of Water And Waste; 18th Ed.; 1992.

Method Reference EPA: Methods For Chemical Analysis Of Water And Wastes; March, 1983.

HACH8000: Chemical Oxygen Demand: 40CFR, 136.3, Method 8000 HACH Handbook of Water Analysis.

Method Reference EPA200.7: 40CFR Part 136, Appendix C.

**: The average dilution water blank for this sample set was 0.7mg/L.

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
4643 Benson Avenue, Baltimore, MD 21227-1410 — Tel: (410) 247-7400 Fax: (410) 247-7402

4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

Don Murphy
DOW CHEMICAL COMPANY USA

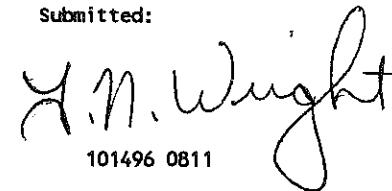
Laboratory Number 296-10-0061-000 Respectfully
Submitted:

FIRE POND GRAB
OLD FIRE POND

Date Sampled 10/02/96
Date Received 10/02/96

Sampled by CLIENT

101496 0811



ANALYSIS FOR REQUESTED PARAMETERS
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED	
					DATE/TIME	ANALYST
Acrylonitrile[107-13-1]	ND	50	ug/L	EPA624	10/07/96 20:05	PLM
Ethylbenzene[100-41-4]	98	10	ug/L	EPA624	10/07/96 20:05	PLM
SURRGATE RECOVERY - VOLATILE FRACTION						
1,2-Dichloroethane-d4 <SURROGATE>	114	-----	% REC	EPA624	10/07/96 20:05	PLM
Toluene-d8 <SURROGATE>	110	-----	% REC	EPA624	10/07/96 20:05	PLM
Bromofluorobenzene <SURROGATE>	115	-----	% REC	EPA624	10/07/96 20:05	PLM

METHOD REFERENCE: EPA624 40 CFR Part 136, Appendix A

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
4643 Benson Avenue, Baltimore, MD 21227-1410 — Tel: (410) 247-7400 Fax: (410) 247-7402

4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614

ENVIRONMENTAL FACILITIES IN ALASKA, CALIFORNIA, FLORIDA, ILLINOIS, MARYLAND, MICHIGAN, MISSOURI, NEW JERSEY, OHIO, WEST VIRGINIA



CHAIN OF CUSTODY RECORD

CT&E Environmental Services Inc.
Laboratory Division

Locations Nationwide
 • Alaska • Missouri
 • California • New Jersey
 • Florida • Ohio
 • Illinois • Pennsylvania
 • Maryland • West Virginia
 • Michigan

① CLIENT: <i>Dewi Chemicals</i>		CONTACT: <i>Don Murphy</i>		PHONE NO: (314) 533-4057		PROJECT: <i>Old Fire Pit</i>		REPORTS TO:		FAX NO: ()		INVOICE TO:		PO. NUMBER:		CT&E Reference: 10-0061-00		PAGE 1 OF 1			



CHAIN OF CUSTODY RECORD

CT&E Environmental Services Inc.
Laboratory Division

Locations Nationwide
 • Alaska • Missouri
 • California • New Jersey
 • Florida • Ohio
 • Illinois • Pennsylvania
 • Maryland • West Virginia
 • Michigan

CT&E Reference: 10-0061.00										PAGE <u>1</u> OF <u>1</u>	
① CLIENT: Dow Chemical		CONTACT: Dan Murphy		PHONE NO: (619) 533-4087		PROJECT: Old Fire Pond		SITE:			
REPORTS TO:				FAX NO: ()							
INVOICE TO:				P.O. NUMBER:							
② LAB NO.		SAMPLE IDENTIFICATION		DATE		TIME		MATRIX		REMARKS	
1012100		Fire Pond		10/12/00		10:00 AM		700		OIL & GREASE	
③		C= COMP		O N T A		E R S		G= GRAB		Preservatives Analysis Required	
④ Collected / Relinquished By: (1)		Date		Time		Received By:				Samples Received Cold? (Circle) YES NO	
John H. Murphy		10/12/00		10:00 AM		John H. Murphy				30	
Relinquished By: (2)		Date		Time		Received By:				Temperature °C: Chain of Custody Seal: (Circle)	
John H. Murphy		10/12/00		10:00 AM		John H. Murphy				INTACT BROKEN ABSENT	
⑤ Relinquished By: (3)		Date		Time		Received By:				Requested Turnaround Time and Special Instructions:	
John H. Murphy		10/12/00		10:00 AM		John H. Murphy					
⑥ Relinquished By: (4)		Date		Time		Received For Laboratory By:					
John H. Murphy		10/12/00		10:00 AM		John H. Murphy					

Pink - Retained by Sampler

Yellow - Returned with Report

Black - Retained by Lab (Project File)

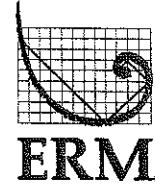
1258 Greenbrier Street Charleston, WV 25311 Tel: (304) 346-0725 Fax: (304) 346-0761 Yellow - Retained by Lab (Project File)

**Environmental
Resources
Management, Inc.**

600A Prestige Park
Hurricane, WV 25526
(304) 757-8017
(304) 757-8190 (fax)

December 10 , 1996

Mr. Dennis Stanley, CEA, PEA
Environmental Compliance Leader
The Dow Chemical Company
Hanging Rock Plant
925 Country Road 1A
Ironton, OH 45638



Project No: 78022.00.01

Re: Analytical Data from Soil Beneath Liner
 Fire Pond Closure

Dear Mr. Stanley:

Please find enclosed the analytical data for the soil samples obtained under the liner for the Fire Pond sampling. The two tables attached summarize the data.

ERM appreciates the opportunity to be of service to Dow Chemical Company . If you have any questions regarding this information, please call me at (304) 757-8017.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul L. Gebhard, P.G."

Paul L. Gebhard, P.G.
Project Manager

Attachment

PRIORITY POLLUTANT LIST VOLATILE ORGANIC COMPOUNDS
 SOIL ANALYTICAL RESULTS
 THE DOW CHEMICAL COMPANY
 FIRE POND CLOSURE
 HANGING ROCK PLANT

SAMPLE LOCATION: DATE COLLECTED:	DOW-S-W-BTM 11/20/96	DOW-S-S-BTM 11/20/96	DOW-S-N-BTM 11/20/96	DOW-S-E-BTM 11/20/96	DOW-S-N-DW 11/6/96	DOW-S-S-DW 11/6/96	DOW-S-E-DW 11/6/96	DOW-S-W-DW 11/6/96	MDL
VOLATILE ORGANIC COMPOUNDS (MG/KG)									
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Bromoethane	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	0.63
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	0.63
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.63
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	0.63
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.63
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	0.63
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	0.63
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	0.63
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Dibromo-chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	0.63
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.63
2-Chloroethyl Vinyl Ether	ND	ND	ND	ND	ND	ND	ND	ND	1.3
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	0.63
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	6.3
Acrolein	ND	ND	ND	ND	ND	ND	ND	ND	0.63
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	0.63
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	0.63
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	0.63
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND	0.63

ND - Not Detected at a concentration greater than the MDL (Method Detection Limit).

PRIORITY POLLUTANT LIST SEMIVOLATILE ORGANIC COMPOUNDS
 SOIL ANALYTICAL RESULTS
 THE DOW CHEMICAL COMPANY
 FIRE POND CLOSURE
 HANGING ROCK PLANT
 IRONTON, OHIO

SAMPLE LOCATION: DATE COLLECTED:	DOW-S-W-BTM 11/20/96	DOW-S-S-BTM 11/20/96	DOW-S-N-BTM 11/20/96	DOW-S-E-BTM 11/20/96	DOW-S-N-DW 11/6/96	DOW-S-E-DW 11/6/96	DOW-S-W-DW 11/6/96	MDL
SEMOVOLATILE ORGANIC COMPOUNDS (MG/KG)								
Phenol	ND	ND	ND	ND	ND	ND	ND	0.33
2-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	0.33
2-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	0.33
2,4-Dimethylphenol	ND	ND	ND	ND	ND	ND	ND	0.33
2,4-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	0.33
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	ND	ND	0.33
2,4,6-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	0.33
2,4-Dinitrophenol	ND	ND	ND	ND	ND	ND	ND	1.7
4-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	1.7
2-Methyl-4,6-dinitrophenol	ND	ND	ND	ND	ND	ND	ND	1.7
Pentachlorophenol	ND	ND	ND	ND	ND	ND	ND	1.7
N-Nitrosodimethylamine	ND	ND	ND	ND	ND	ND	ND	0.33
bis(2-Chloroethyl)ether	ND	ND	ND	ND	ND	ND	ND	0.33
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.33
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.33
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.33
bis(2-Chloroisopropyl)ether	ND	ND	ND	ND	ND	ND	ND	0.33
N-Nitroso-di-n-propylamine	ND	ND	ND	ND	ND	ND	ND	0.67
Nitrobenzene	ND	ND	ND	ND	ND	ND	ND	0.33
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	0.33
Isophorone	ND	ND	ND	ND	ND	ND	ND	0.33
bis(2-Chloroethoxy)methane	ND	ND	ND	ND	ND	ND	ND	0.33
Naphthalene	ND	ND	ND	ND	ND	ND	ND	0.33
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	0.33
Hexachlorocyclopentadiene	ND	ND	ND	ND	ND	ND	ND	0.33
2-Chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	0.33
Dimethylphthalate	ND	ND	ND	ND	ND	ND	ND	0.33
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	0.33
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	0.33
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	0.33
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	0.33
Fluorene	ND	ND	ND	ND	ND	ND	ND	0.33
4-Chlorophenyl-phenyl ether	ND	ND	ND	ND	ND	ND	ND	0.33
1,2-Diphenylhydrazine	ND	ND	ND	ND	ND	ND	ND	0.33

PRIORITY POLLUTANT LIST SEMI-VOLATILE ORGANIC COMPOUNDS
 SOIL ANALYTICAL RESULTS
 THE DOW CHEMICAL COMPANY
 FIRE POND CLOSURE
 HANGING ROCK PLANT
 IRONTON, OHIO

SAMPLE LOCATION: DATE COLLECTED:	DOW-S-W-BTM 11/20/96	DOW-S-BTM 11/20/96	DOW-S-N-BTM 11/20/96	DOW-S-E-BTM 11/20/96	DOW-S-N-DW 11/6/96	DOW-S-E-DW 11/6/96	DOW-S-W-DW 11/6/96	MDL
SEMI-VOLATILE ORGANIC COMPOUNDS (MG/KG)								
Diethylphthalate	ND	ND	ND	ND	ND	ND	ND	0.33
N,N-Nitrosodiphenylamine	ND	ND	ND	ND	ND	ND	ND	0.67
Hexachlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.33
4-Bromophenyl-phenyl ether	ND	ND	ND	ND	ND	ND	ND	0.33
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	0.33
Anthracene	ND	ND	ND	ND	ND	ND	ND	0.33
Di-n-butylphthalate	ND	ND	ND	ND	ND	ND	ND	0.33
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	0.33
Pyrene	ND	ND	ND	ND	ND	ND	ND	0.33
Benzidine	ND	ND	ND	ND	ND	ND	ND	1.7
Butylbenzylphthalate	ND	ND	ND	ND	ND	ND	ND	0.33
bis(2-Ethylhexyl)phthalate	ND	ND	ND	ND	ND	ND	ND	0.33
Chrysene	ND	ND	ND	ND	ND	ND	ND	0.33
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	ND	0.33
3,3'-Dichlorobenzidine	ND	ND	ND	ND	ND	ND	ND	1.7
Di-n-octylphthalate	ND	ND	ND	ND	ND	ND	ND	0.33
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	ND	0.33
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND	0.33
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	0.33
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	0.67
DBenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	0.67
Benzog(h)perylene	ND	ND	ND	ND	ND	ND	ND	0.67

ND - Not Detected at a concentration greater than the MDL (Method Detection Limit).



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-001 Respectfully
Submitted:

TB-W-1
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96
Date Received 11/07/96

Sampled by CT&E
PO # 78022.00.01

111896 1535

H.M. Wright

PRIORITY POLLUTANTS: VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED	
					DATE/TIME	ANALYST
Chloromethane[74-87-3]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
Bromomethane[74-83-9]	ND	1D	ug/L	EPA624	11/12/96 12:00	MAM
Vinyl chloride[75-01-4]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
Chloroethane[75-00-3]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
Methylene Chloride[75-09-2]	ND	1D	ug/L	EPA624	11/12/96 12:00	MAM
1,1-Dichloroethene[75-35-4]	ND	1D	ug/L	EPA624	11/12/96 12:00	MAM
1,1-Dichloroethane[75-34-3]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
trans-1,2-Dichloroethene[156-60-5]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
Chloroform[67-66-3]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
1,2-Dichloroethane[107-D6-2]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
1,1,1-Trichloroethane[71-55-6]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
Carbon tetrachloride [56-23-5]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
Bromodichloromethane [75-27-4]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
1,2-Dichloropropane[78-87-5]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
trans-1,3-Dichloropropene [10D61-02-6]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
cis-1,3-Dichloropropene [10061-01-5]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
Trichloroethene[79-01-6]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
Chlorodibromomethane[124-48-1]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
1,1,2-Trichloroethane[79-00-5]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
2-Chloroethyl vinyl ether[110-75-8]	ND	20	ug/L	EPA624	11/12/96 12:00	MAM
Bromoform[75-25-2]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
Tetrachloroethene[127-18-4]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
Benzene[71-43-2]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
Toluene[108-88-3]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
Ethylbenzene[100-41-4]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
Chlorobenzene[108-90-7]	ND	1D	ug/L	EPA624	11/12/96 12:00	MAM
Acrylonitrile[107-13-1]	ND	100	ug/L	EPA624	11/12/96 12:00	MAM
Acrolein[107-02-8]	ND	100	ug/L	EPA624	11/12/96 12:00	MAM
1,2-Dichlorobenzene[95-50-1]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
1,3-Dichlorobenzene[541-73-1]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
1,4-Dichlorobenzene[106-46-7]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM
Trichlorofluoromethane[75-69-4]	ND	10	ug/L	EPA624	11/12/96 12:00	MAM

Continued on next page

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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-001 Respectfully
Submitted:

TB-W-1
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96
Date Received 11/07/96

Sampled by CT&E
PO # 78022.00.01

H. M. Wright

111896 1535

PAGE 2

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
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Continued from previous page

SURROGATE RECOVERY - VOLATILE FRACTION

1,2-Dichloroethane-d4 <SURRGATE>	101	-----	% REC	EPA624	11/12/96 12:00 MAM
Toluene-d8 <SURRGATE>	102	-----	% REC	EPA624	11/12/96 12:00 MAM
Bromofluorobenzene <SURROGATE>	109	-----	% REC	EPA624	11/12/96 12:00 MAM

METHOD REFERENCE: EPA624 40 CFR Part 136, Appendix A

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-002 Respectfully
Submitted:

DOW-S-N-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 14:30
Date Received 11/07/96

Sampled by CLIENT

111896 1535

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Vinyl chloride[75-01-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
1,1-Dichloroethene[75-35-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
1,1-Dichloroethane[75-34-3]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Chloroform[67-66-3]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
1,2-Dichloroethane[107-06-2]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Carbon tetrachloride[56-23-51]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Dibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/12/96 14:02 MAM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Acrylonitrile[107-13-1]	ND	6.3	mg/Kg	SW8240	11/12/96 14:02 MAM
Acrolein[107-02-8]	ND	6.3	mg/Kg	SW8240	11/12/96 14:02 MAM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM
Trichlorofluoromethane[75-69-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:02 MAM

Continued on next page

5

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Laboratory Analysis ReportP. Gebhard
ERM, INC.Laboratory Number 296-11-0159-002 Respectfully
Submitted:DDW-S-N-DW GRAB
DOW HANGING ROCK, OHIODate Sampled 11/06/96 14:30
Date Received 11/07/96

Sampled by CLIENT

111896 1535
PAGE 2

PRIORITY POLLUTANTS:VOLATILE FRACTION
 Purge/Trap/Desorb
 ALL RESULTS ARE DN AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	ANALYZED	
				METHOD	DATE/TIME/ANALYST

Continued from previous page

SURROGATE RECOVERY - VOLATILE FRACTION

1,2-Dichloroethane-d4 <SURROGATE>	99	-----	% REC	SW8240	11/12/96 14:02 MAM
Toluene-d8 <SURROGATE>	1D3	-----	% REC	SW8240	11/12/96 14:D2 MAM
Bromofluorobenzene <SURROGATE>	104	-----	% REC	SW8240	11/12/96 14:02 MAM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

 1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-002 Respectfully
Submitted:

DOW-S-N-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 14:30
Date Received 11/07/96

Sampled by CLIENT

J.N. Wright
111896 1535

ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED	
					DATE/TIME/ANALYST	
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/08/96	20:42 JER
2-Chlorophenol [95-57-8]	ND	0.33	mg/Kg	SW8270	11/08/96	20:42 JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/08/96	20:42 JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/08/96	20:42 JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/08/96	20:42 JER
4-Chloro-3-methylphenol [59-50-7]	ND	0.33	mg/Kg	SW8270	11/08/96	20:42 JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/08/96	20:42 JER
2,4-Dinitrophenol [51-28-5]	ND	1.7	mg/Kg	SW8270	11/08/96	20:42 JER
4-Nitrophenol [100-02-7]	ND	1.7	mg/Kg	SW8270	11/08/96	20:42 JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/08/96	20:42 JER
Pentachlorophenol [87-86-5]	ND	1.7	mg/Kg	SW8270	11/08/96	20:42 JER
SURRGATE RECOVERY - ACID FRACTION						
2-Fluorophenol <SURRGATE>	42	-----	% REC	SW8270	11/08/96	20:42 JER
Phenol-d6 <SURROGATE>	45	-----	% REC	SW8270	11/08/96	20:42 JER
2,4,6-Tribromophenol <SURROGATE>	59	-----	% REC	SW8270	11/08/96	20:42 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-002 Respectfully
Submitted:

DOW-S-N-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 14:30
Date Received 11/07/96

Sampled by CLIENT

111896 1535

H.N. Wright

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/08/96 20:42 JER
Bis(2-chloroethyl)ether[111-44-4]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
1,3-Dichlorobenzene[541-73-1]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
1,4-Dichlorobenzene[106-46-7]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Bis(2-chloroisopropyl)ether[108-60-1]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/08/96 20:42 JER
Nitrobenzene[98-95-3]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Hexachloroethane[67-72-1]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Iso-phorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Naphthalene[91-20-3]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Hexachlorocyclopentadiene[77-47-4]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Dimethyl phthalate[131-11-3]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Acenaphthylene[208-96-8]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Acenaphthene[83-32-9]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
2,6-Dinitrotoluene[606-20-2]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Fluorene[86-73-7]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
1,2-Diphenylhydrazine[122-66-7]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
N-Nitrosodiphenylamine[86-30-6]	ND	0.67	mg/Kg	SW8270	11/08/96 20:42 JER
Hexachlorobenzene[118-74-1]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
4-Bromophenyl phenyl ether[101-55-3]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Anthracene[120-12-7]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Di-n-butyl phthalate[84-74-2]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Fluoranthene[206-44-0]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Pyrene[129-00-0]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER

Continued on next page

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Laboratory Analysis Report

P. Gebhard
ERM, INC.Laboratory Number 296-11-0159-002 Respectfully
Submitted:DOW-S-N-DW GRAB
DOW HANGING ROCK, OHIODate Sampled 11/06/96 14:30
Date Received 11/07/96

Sampled by CLIENT

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PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
 BASE/NEUTRAL FRACTION
 Soil Procedure/Sonication Extraction
 ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Benzidine[92-87-5]	ND	1.7	mg/Kg	SW8270	11/08/96 20:42 JER
Butyl benzyl phthalate[85-68-7]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Bis(2-ethylhexyl)phthalate[117-81-7]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Chrysene[218-01-9]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Benzo(a)anthracene[56-55-3]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
3,3'-Dichlorobenzidine[91-94-1]	ND	1.7	mg/Kg	SW8270	11/08/96 20:42 JER
Di-n-octylphthalate[117-84-0]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Benzo(b)fluoranthene[205-99-2]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Benzo(k)fluoranthene[207-08-9]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Benzo(a)pyrene[50-32-8]	ND	0.33	mg/Kg	SW8270	11/08/96 20:42 JER
Indeno(1,2,3-cd)pyrene[193-39-5]	ND	0.67	mg/Kg	SW8270	11/08/96 20:42 JER
Dibenzo(a,h)anthracene[53-70-3]	ND	0.67	mg/Kg	SW8270	11/08/96 20:42 JER
Benzo(ghi)perylene[191-24-2]	ND	0.67	mg/Kg	SW8270	11/08/96 20:42 JER
SURROGATE RECOVERY - BASE/NEUT FRACTION					
Nitrobenzene-d5<SURROGATE>	49	-----	% REC	SW8270	11/08/96 20:42 JER
2-Fluorobiphenyl <SURROGATE>	45	-----	% REC	SW8270	11/08/96 20:42 JER
o-Terphenyl <SURROGATE>	55	-----	% REC	SW8270	11/08/96 20:42 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-003 Respectfully
Submitted:

DDW-S-S-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:55
Date Received 11/07/96

Sampled by CLIENT

111896 1535

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Vinyl chloride[75-01-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,1-Dichloroethene[75-35-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,1-Dichloroethane[75-34-3]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Chloroform[67-66-3]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,2-Dichloroethane[107-06-2]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Carbon tetrachloride[56-23-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Dibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/12/96 14:43 MAM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Acrylonitrile[107-13-1]	ND	6.3	mg/Kg	SW8240	11/12/96 14:43 MAM
Acrolein[107-02-8]	ND	6.3	mg/Kg	SW8240	11/12/96 14:43 MAM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM
Trichlorofluoromethane[75-69-4]	ND	0.63	mg/Kg	SW8240	11/12/96 14:43 MAM

Continued on next page

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-003 Respectfully
Submitted:

DOW-S-S-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:55
Date Received 11/07/96

Sampled by CLIENT

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PAGE 2

PRIORITY POLLUTANTS:VOLATILE FRACTION

Purge/Trap/Desorb

ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
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Continued from previous page

SURROGATE RECOVERY - VOLATILE FRACTION

1,2-Dichloroethane-d4 <SURROGATE>	97	-----	% REC	SW8240	11/12/96 14:43 MAM
Toluene-d8 <SURROGATE>	102	-----	% REC	SW8240	11/12/96 14:43 MAM
Bromofluorobenzene <SURROGATE>	101	-----	% REC	SW8240	11/12/96 14:43 MAM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-003 Respectfully
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DOW-S-S-DW GRAB
DDW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:55
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Sampled by CLIENT

H. M. Wright
111896 1535

ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	ANALYZED	
				METHOD	DATE/TIME/ANALYST
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2-Chlorophenol [95-57-8]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
4-Chloro-3-methylphenol [59-50-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2,4-Dinitrophenol [51-28-5]	ND	1.7	mg/Kg	SW8270	11/08/96 21:33 JER
4-Nitrophenol [100-02-7]	ND	1.7	mg/Kg	SW8270	11/08/96 21:33 JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/08/96 21:33 JER
Pentachlorophenol [87-86-5]	ND	1.7	mg/Kg	SW8270	11/08/96 21:33 JER
SURROGATE RECOVERY - ACID FRACTION					
2-Fluorophenol <SURROGATE>	59	-----	% REC	SW8270	11/08/96 21:33 JER
Phenol-d6<SURROGATE>	61	-----	% REC	SW8270	11/08/96 21:33 JER
2,4,6-Tribromophenol <SURROGATE>	83	-----	% REC	SW8270	11/08/96 21:33 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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Laboratory Analysis ReportP. Gebhard
ERM, INC.Laboratory Number 296-11-0159-0D3 Respectfully
Submitted:DOW-S-S-DW GRAB
DOW HANGING ROCK, OHIODate Sampled 11/06/96 13:55
Date Received 11/07/96

Sampled by CLIENT

111896 1535

H.N. Wright
**PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS**

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/08/96 21:33 JER
Bis(2-chloroethyl)ether[111-44-4]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
1,3-Dichlorobenzene[541-73-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
1,4-Dichlorobenzene[106-46-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Bis(2-chloroisopropyl)ether[108-60-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/08/96 21:33 JER
Nitrobenzene[98-95-3]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Hexachloroethane[67-72-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Isophorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Naphthalene [91-20-3]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Hexachlorocyclopentadiene[77-47-4]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Dimethyl phthalate[131-11-3]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Acenaphthylene [208-96-8]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Acenaphthene[83-32-9]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2,6-Dinitrotoluene[606-20-2]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Fluorene[86-73-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
1,2-Diphenylhydrazine [122-66-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
N-Nitrosodiphenylamine[86-30-6]	ND	0.67	mg/Kg	SW8270	11/08/96 21:33 JER
Hexachlorobenzene[118-74-1]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
4-Bromophenyl phenyl ether[101-55-3]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Anthracene[120-12-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Di-n-butyl phthalate[84-74-2]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Fluoranthene[206-44-0]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Pyrene[129-00-0]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER

Continued on next page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-003 Respectfully
Submitted:

DOW-S-S-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:55
Date Received 11/07/96

Sampled by CLIENT

111896 1535
PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE DN AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST

Continued from previous page					
Benzidine[92-87-5]	ND	1.7	mg/Kg	SW8270	11/08/96 21:33 JER
Butyl benzyl phthalate[85-68-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Bis(2-ethylhexyl)phthalate[117-81-7]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Chrysene[218-01-9]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Benzo(a)anthracene[56-55-3]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
3,3'-Dichlorobenzidine[91-94-1]	NO	1.7	mg/Kg	SW8270	11/08/96 21:33 JER
Di-n-octylphthalate[117-84-0]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Benzo(b)fluoranthene[205-99-2]	NO	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Benzo(k)fluoranthene[207-08-9]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Benzo(a)pyrene[50-32-8]	ND	0.33	mg/Kg	SW8270	11/08/96 21:33 JER
Indeno(1,2,3-cd)pyrene[193-39-5]	ND	0.67	mg/Kg	SW8270	11/08/96 21:33 JER
Dibenzo(a,h)anthracene[53-70-3]	ND	0.67	mg/Kg	SW8270	11/08/96 21:33 JER
Benzo(ghi)perylene[191-24-2]	ND	0.67	mg/Kg	SW8270	11/08/96 21:33 JER
SURROGATE RECOVERY - BASE/NEUT FRACTION					
Nitrobenzene-d5<SURROGATE>	67	-----	% REC	SW8270	11/08/96 21:33 JER
2-Fluorobiphenyl<SURROGATE>	65	-----	% REC	SW8270	11/08/96 21:33 JER
o-Terphenyl<SURROGATE>	65	-----	% REC	SW8270	11/08/96 21:33 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614

Laboratory Analysis Report

P. Gebhard
ERM, INC.Laboratory Number 296-11-0159-004 Respectfully
Submitted:DOW-S-E-DW GRAB
DOW HANGING ROCK, OHIODate Sampled 11/06/96 13:15
Date Received 11/07/96

Sampled by CLIENT

111896 1535

*H.M. Wright*PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Vinyl chloride[75-01-4]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,1-Dichloroethene[75-35-4]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,1-Dichloroethane[75-34-3]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Chloroform[67-66-3]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,2-Dichloroethane[107-06-2]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Carbon tetrachloride[56-23-5]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Dibromochloromethane[124-48-11]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/12/96 15:23 MAM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Acrylonitrile[107-13-1]	ND	6.3	mg/Kg	SW8240	11/12/96 15:23 MAM
Acrolein[107-02-8]	ND	6.3	mg/Kg	SW8240	11/12/96 15:23 MAM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM
Trichlorofluoromethane[75-69-4]	ND	0.63	mg/Kg	SW8240	11/12/96 15:23 MAM

Continued on next page



CT&E Environmental Services Inc.

® Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-004 Respectfully
Submitted:

DOW-S-E-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:15
Date Received 11/07/96

Sampled by CLIENT

111896 1535
PAGE 2

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
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Continued from previous page

SURROGATE RECOVERY - VOLATILE FRACTION

1,2-Dichloroethane-d4 <SURROGATE>	101	-----	% REC	SW8240	11/12/96 15:23 MAM
Toluene-d8 <SURROGATE>	105	-----	% REC	SW8240	11/12/96 15:23 MAM
Bromofluorobenzene <SURROGATE>	109	-----	% REC	SW8240	11/12/96 15:23 MAM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

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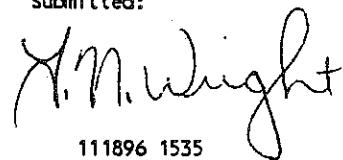
4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614

Laboratory Analysis Report

P. Gebhard
ERM, INC.Laboratory Number 296-11-0159-004 Respectfully
Submitted:DOW-S-E-DW GRAB
DOW HANGING ROCK, OHIODate Sampled 11/06/96 13:15
Date Received 11/07/96

Sampled by CLIENT

111896 1535



ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	ANALYZED	
				METHOD	DATE/TIME/ANALYST
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
2-Chlorophenol [95-57-8]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
4-Chloro-3-methylphenol [59-50-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
2,4-Dinitrophenol [51-28-5]	ND	1.7	mg/Kg	SW8270	11/08/96 22:25 JER
4-Nitrophenol [100-02-7]	ND	1.7	mg/Kg	SW8270	11/08/96 22:25 JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/08/96 22:25 JER
Pentachlorophenol [87-86-5]	ND	1.7	mg/Kg	SW8270	11/08/96 22:25 JER
SURROGATE RECOVERY - ACID FRACTION					
2-Fluorophenol <SURROGATE>	59	-----	% REC	SW8270	11/08/96 22:25 JER
Phenol-d6 <SURRGATE>	62	-----	% REC	SW8270	11/08/96 22:25 JER
2,4,6-Tribromophenol <SURROGATE>	81	-----	% REC	SW8270	11/08/96 22:25 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

 P. Gebhard
 ERM, INC.

 Laboratory Number 296-11-0159-004 Respectfully
 Submitted:

 DOW-S-E-DW GRAB
 DOW HANGING ROCK, OHIO

 Date Sampled 11/06/96 13:15
 Date Received 11/07/96

Sampled by CLIENT

H.N. Wright
 111896 1535

 PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
 BASE/NEUTRAL FRACTION
 Soil Procedure/Sonication Extraction
 ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED	
					DATE/TIME	ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/08/96 22:25	JER
Bis(2-chloroethyl)ether[111-44-4]	NO	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
1,3-Dichlorobenzene[541-73-1]	NO	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
1,4-Dichlorobenzene[106-46-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Bis(2-chloroisopropyl)ether[108-60-1]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/08/96 22:25	JER
Nitrobenzene[98-95-3]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Hexachloroethane[67-72-1]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Isophorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Naphthalene[91-20-3]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Hexachlorocyclopentadiene[77-47-4]	NO	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Dimethyl phthalate[131-11-3]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Acenaphthylene[208-96-8]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Acenaphthene[83-32-9]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
2,6-Dinitrotoluene[606-20-2]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Fluorene[86-73-7]	NO	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
1,2-Diphenylhydrazine[122-66-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
N-Nitrosodiphenylamine[86-30-6]	ND	0.67	mg/Kg	SW8270	11/08/96 22:25	JER
Hexachlorobenzene[118-74-1]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
4-Bromophenyl phenyl ether[101-55-3]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Anthracene[120-12-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Di-n-butyl phthalate[84-74-2]	NO	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Fluoranthene[206-44-0]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER
Pyrene[129-00-0]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25	JER

Continued on next page

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-004 Respectfully
Submitted:

DOW-S-E-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 13:15
Date Received 11/07/96

Sampled by CLIENT

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PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE DN AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST

Continued from previous page					
Benzidine[92-87-5]	ND	1.7	mg/Kg	SW8270	11/08/96 22:25 JER
Butyl benzyl phthalate[85-68-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Bis(2-ethylhexyl)phthalate[117-81-7]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Chrysene[21B-01-9]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Benzo(a)anthracene[56-55-3]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
3,3'-Dichlorobenzidine[91-94-1]	ND	1.7	mg/Kg	SW8270	11/08/96 22:25 JER
Di-n-octylphthalate[117-84-0]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Benzo(b)fluoranthene[205-99-2]	ND	0.33	mg/Kg	SWB270	11/08/96 22:25 JER
Benzo(k)fluoranthene[207-08-9]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Benzo(a)pyrene[50-32-8]	ND	0.33	mg/Kg	SW8270	11/08/96 22:25 JER
Indeno(1,2,3-cd)pyrene[193-39-5]	ND	0.67	mg/Kg	SW8270	11/08/96 22:25 JER
Dibenzo(a,h)anthracene[53-70-3]	ND	0.67	mg/Kg	SW8270	11/08/96 22:25 JER
Benzo(ghi)perylene[191-24-2]	ND	0.67	mg/Kg	SW8270	11/08/96 22:25 JER
SURROGATE RECOVERY - BASE/NEUT FRACTION					
Nitrobenzene-d5<SURROGATE>	66	-----	% REC	SW8270	11/08/96 22:25 JER
2-Fluorobiphenyl<SURROGATE>	65	-----	% REC	SWB270	11/08/96 22:25 JER
o-Terphenyl<SURROGATE>	63	-----	% REC	SW8270	11/08/96 22:25 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

Laboratory Analysis ReportP. Gebhard
ERM, INC.Laboratory Number 296-11-0159-005 Respectfully
Submitted:DOW-S-W-DW GRAB
DOW HANGING ROCK, OHIODate Sampled 11/06/96 14:15
Date Received 11/07/96

Sampled by CLIENT

111896 1535

PRIORITY POLLUTANTS: VDLATILE FRACTION
 Purge/Trap/Desorb
 ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Vinyl chloride[75-01-4]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,1-Dichloroethene[75-35-4]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,1-Dichloroethane[75-34-3]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Chloroform[67-66-3]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,2-Dichloroethane[107-06-2]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Carbon tetrachloride[56-23-5]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Dibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,1,2-Trichloroethane[79-00-51]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/12/96 16:04 MAM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,1,2,2-Tetrachloroethane[79-34-51]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Acrylonitrile[107-13-1]	ND	6.3	mg/Kg	SW8240	11/12/96 16:04 MAM
Acrolein[107-02-8]	ND	6.3	mg/Kg	SW8240	11/12/96 16:04 MAM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM
Trichlorofluoromethane[75-69-4]	ND	0.63	mg/Kg	SW8240	11/12/96 16:04 MAM

Continued on next page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-005 Respectfully
Submitted:

DOW-S-W-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 14:15
Date Received 11/07/96

Sampled by CLIENT

H. M. Wright
111896 1535
PAGE 2

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE DN AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
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Continued from previous page

SURROGATE RECOVERY - VOLATILE FRACTION

1,2-Dichloroethane-d4 <SURROGATE>	99	-----	% REC	SW8240	11/12/96 16:04 MAM
Toluene-d8 <SURROGATE>	104	-----	% REC	SW8240	11/12/96 16:04 MAM
Bromofluorobenzene <SURROGATE>	108	-----	% REC	SW8240	11/12/96 16:D4 MAM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Laboratory Analysis Report

P. Gebhard
ERM, INC.Laboratory Number 296-11-0159-005 Respectfully
Submitted:DOW-S-W-DW GRAB
DOW HANGING ROCK, OHIODate Sampled 11/06/96 14:15
Date Received 11/07/96

Sampled by CLIENT

111896 1535

J. M. Wright

ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	ANALYZED	
				METHOD	DATE/TIME/ANALYST
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
2-Chlorophenol [95-57-8]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
4-Chloro-3-methylphenol [59-50-7]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
2,4-Dinitrophenol [51-28-5]	ND	1.7	mg/Kg	SW8270	11/08/96 23:16 JER
4-Nitrophenol [100-02-7]	ND	1.7	mg/Kg	SW8270	11/08/96 23:16 JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/08/96 23:16 JER
Pentachlorophenol [87-86-5]	ND	1.7	mg/Kg	SW8270	11/08/96 23:16 JER
SURROGATE RECOVERY - ACID FRACTION					
2-Fluorophenol <SURROGATE>	62	-----	% REC	SW8270	11/08/96 23:16 JER
Phenol-d6 <SURROGATE>	63	-----	% REC	SW8270	11/08/96 23:16 JER
2,4,6-Tribromophenol <SURROGATE>	90	-----	% REC	SW8270	11/08/96 23:16 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-005 Respectfully
Submitted:

DOW-S-W-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 14:15
Date Received 11/07/96

Sampled by CLIENT

111896 1535

H.M. Wright

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/08/96 23:16 JER
Bis(2-chloroethyl)ether[111-44-4]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
1,3-Dichlorobenzene[541-73-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
1,4-Dichlorobenzene[106-46-7]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Bis(2-chloroisopropyl)ether[108-60-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/08/96 23:16 JER
Nitrobenzene[98-95-3]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Hexachloroethane[67-72-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Isophorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Naphthalene[91-20-3]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Hexachlorocyclopentadiene[77-47-4]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Dimethyl phthalate[131-11-3]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Acenaphthylene[208-96-8]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Acenaphthene[83-32-9]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
2,6-Dinitrotoluene[606-20-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Fluorene[86-73-7]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
1,2-Diphenylhydrazine[122-66-7]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
N-Nitrosodiphenylamine[86-30-6]	ND	0.67	mg/Kg	SW8270	11/08/96 23:16 JER
Hexachlorobenzene[118-74-1]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
4-Bromophenyl phenyl ether[101-55-3]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Anthracene[120-12-7]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Di-n-butyl phthalate[84-74-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Fluoranthene[206-44-0]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Pyrene[129-00-0]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER

Continued on next page

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0159-005 Respectfully
Submitted:

DOW-S-W-DW GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/06/96 14:15
Date Received 11/07/96

Sampled by CLIENT

111896 1535
PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Benzidine[92-87-5]	NO	1.7	mg/Kg	SW8270	11/08/96 23:16 JER
Butyl benzyl phthalate[85-68-7]	NO	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Bis(2-ethylhexyl)phthalate[117-81-7]	NO	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Chrysene[218-01-9]	NO	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Benzo(a)anthracene[56-55-3]	NO	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
3,3'-Oichlorobenzidine[91-94-11]	ND	1.7	mg/Kg	SW8270	11/08/96 23:16 JER
Di-n-octylphthalate[117-84-0]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Benzo(b)fluoranthene[205-99-2]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Benzo(k)fluoranthene[207-08-9]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Benzo(a)pyrene[50-32-8]	ND	0.33	mg/Kg	SW8270	11/08/96 23:16 JER
Indeno(1,2,3-cd)pyrene[193-39-5]	ND	0.67	mg/Kg	SW8270	11/08/96 23:16 JER
Dibenzo(a,h)anthracene[53-70-3]	ND	0.67	mg/Kg	SW8270	11/08/96 23:16 JER
Benzo(ghi)perylene[191-24-2]	ND	0.67	mg/Kg	SW8270	11/08/96 23:16 JER
SURROGATE RECOVERY - BASE/NEUT FRACTION					
Nitrobenzene-d5<SURROGATE>	71	-----	% REC	SW8270	11/08/96 23:16 JER
2-Fluorobiphenyl<SURROGATE>	69	-----	% REC	SW8270	11/08/96 23:16 JER
<i>o</i> -Terphenyl<SURROGATE>	69	-----	% REC	SW8270	11/08/96 23:16 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.



CT&E Environmental Services Inc.

Laboratory Division

NOV 25 1996

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-001 Respectfully
Submitted:

DOW-S-W-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.00.01

112296 1028

H.N. Wright

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Vinyl chloride[75-01-4]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,1-Dichloroethene[75-35-4]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,1-Dichloroethane[75-34-3]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Chloroform[67-66-3]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,2-Dichloroethane[107-06-2]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Carbon tetrachloride[56-23-5]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Dibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/21/96 18:25 PLM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,1,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Acrylonitrile[107-13-1]	ND	6.3	mg/Kg	SW8240	11/21/96 18:25 PLM
Acrolein[107-02-8]	ND	6.3	mg/Kg	SW8240	11/21/96 18:25 PLM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM
Trichlorofluoromethane[75-69-4]	ND	0.63	mg/Kg	SW8240	11/21/96 18:25 PLM

Continued on next page

1258 Greenbrier Street, Charleston, WV-25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
4643 Benson Avenue, Baltimore, MD 21227-1410 — Tel: (410) 247-7400 Fax: (410) 247-7402

4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-001 Respectfully
Submitted:

DOW-S-W-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.00.01

112296 1028

PAGE 2

PRIORITY POLLUTANTS: VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
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Continued from previous page

SURROGATE RECOVERY - VOLATILE FRACTION

1,2-Dichloroethane-d4 <SURROGATE>	108	-----	% REC	SW8240	11/21/96 18:25 PLM
Toluene-d8 <SURROGATE>	104	-----	% REC	SW8240	11/21/96 18:25 PLM
Bromofluorobenzene <SURROGATE>	102	-----	% REC	SW8240	11/21/96 18:25 PLM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

	DATA:
	WQAQ DA

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

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Sampled by CLIENT
PO # 78022.00.01

112296 1028

J.N. Wright

ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED	
					DATE/TIME	ANALYST
Phenol [108-95-2]	NO	0.33	mg/Kg	SW8270	11/21/96 15:19	JER
2-Chlorophenol [95-57-8]	NO	0.33	mg/Kg	SW8270	11/21/96 15:19	JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19	JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19	JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19	JER
4-Chloro-3-methylphenol [59-50-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19	JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19	JER
2,4-Dinitrophenol [51-28-5]	ND	1.7	mg/Kg	SW8270	11/21/96 15:19	JER
4-Nitrophenol [100-02-7]	ND	1.7	mg/Kg	SW8270	11/21/96 15:19	JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/21/96 15:19	JER
Pentachlorophenol [87-86-5]	ND	1.7	mg/Kg	SW8270	11/21/96 15:19	JER
SURRGATE RECDVERY - ACID FRACTION						
2-Fluorophenol <SURROGATE>	67	-----	% REC	SW8270	11/21/96 15:19	JER
Phenol-d6 <SURROGATE>	69	-----	% REC	SW8270	11/21/96 15:19	JER
2,4,6-Tribromophenol <SURROGATE>	96	-----	% REC	SW8270	11/21/96 15:19	JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-0D1 Respectfully
Submitted:

DOW-S-W-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.00.01

112296 1028

J.M. Wright

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE DN AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
N-Nitrosodimethylamine [62-75-9]	ND	1.7	mg/Kg	SW8270	11/21/96 15:19 JER
Bis(2-chloroethyl)ether [111-44-4]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
1,3-Dichlorobenzene [541-73-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
1,4-Dichlorobenzene [106-46-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
1,2-Dichlorobenzene [95-50-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Bis(2-chloroisopropyl)ether [108-60-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
N-Nitrosodi-n-propylamine [621-64-7]	ND	0.67	mg/Kg	SW8270	11/21/96 15:19 JER
Nitrobenzene [98-95-3]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Hexachloroethane [67-72-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Isophorone [78-59-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Bis(2-chloroethoxy)methane [111-91-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
1,2,4-Trichlorobenzene [120-82-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Naphthalene [91-20-3]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Hexachlorobutadiene [87-68-3]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Hexachlorocyclopentadiene [77-47-4]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
2-Chloronaphthalene [91-58-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Dimethyl phthalate [131-11-3]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Acenaphthylene [208-96-8]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Acenaphthene [83-32-9]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
2,6-Dinitrotoluene [606-20-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
2,4-Dinitrotoluene [121-14-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Fluorene [86-73-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
4-Chlorophenyl phenyl ether [7005-72-3]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
1,2-Diphenylhydrazine [122-66-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Diethyl phthalate [84-66-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
N-Nitrosodiphenylamine [86-3D-6]	ND	0.67	mg/Kg	SW8270	11/21/96 15:19 JER
Hexachlorobenzene [118-74-1]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
4-Bromophenyl phenyl ether [101-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Phenanthrene [85-01-8]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Anthracene [120-12-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Di-n-butyl phthalate [84-74-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Fluoranthene [206-44-0]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER

Continued on next page

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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-05D9-0D1 Respectfully
Submitted:

DOW-S-W-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.00.01

112296 1028

PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Pyrene[129-00-0]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Benzidine[92-87-5]	NO	1.7	mg/Kg	SW8270	11/21/96 15:19 JER
Butyl benzyl phthalate[85-68-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Bis(2-ethylhexyl)phthalate[117-81-7]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Chrysene[218-01-9]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Benzo(a)anthracene[56-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
3,3'-Oichlorobenzidine[91-94-1]	ND	1.7	mg/Kg	SW8270	11/21/96 15:19 JER
Di-n-octylphthalate[117-84-0]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Benzo(b)fluoranthene[205-99-2]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Benzo(k)fluoranthene[207-08-9]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Benzo(a)pyrene[50-32-8]	ND	0.33	mg/Kg	SW8270	11/21/96 15:19 JER
Indeno(1,2,3-cd)pyrene[193-39-5]	ND	0.67	mg/Kg	SW8270	11/21/96 15:19 JER
Dibenzo(a,h)anthracene[53-70-3]	NO	0.67	mg/Kg	SW8270	11/21/96 15:19 JER
Benzo(ghi)perylene[191-24-2]	NO	0.67	mg/Kg	SW8270	11/21/96 15:19 JER
SURROGATE RECOVERY - BASE/NEUT FRACTION					
Nitrobenzene-d5<SURROGATE>	64	-----	% REC	SW8270	11/21/96 15:19 JER
2-Fluorobiphenyl<SURROGATE>	76	-----	% REC	SW8270	11/21/96 15:19 JER
o-Terphenyl<SURROGATE>	80	-----	% REC	SW8270	11/21/96 15:19 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

Laboratory Analysis Report

P. Gebhard
ERM, INC.Laboratory Number 296-11-0509-002 Respectfully
Submitted:DOW-S-S-BTM GRAB
DOW HANGING ROCK, OHIODate Sampled 11/20/96 14:30
Date Received 11/20/96Sampled by CLIENT
PO # 78022.DD01

112296 1028

*H.M. Wright*PRIDRITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED	
					DATE/TIME	ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
Vinyl chloride[75-01-4]	ND	0.63	mg/Kg	SW824D	11/21/96 19:02	PLM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW824D	11/21/96 19:02	PLM
1,1-Dichloroethene[75-35-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
1,1-Dichloroethane[75-34-3]	ND	0.63	mg/Kg	SW824D	11/21/96 19:02	PLM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
Chloroform[67-66-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
1,2-Dichloroethane[107-06-2]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
Carbon tetrachloride[56-23-5]	ND	0.63	mg/Kg	SW824D	11/21/96 19:02	PLM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
Dibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/21/96 19:02	PLM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW824D	11/21/96 19:02	PLM
Acrylonitrile[107-13-1]	ND	6.3	mg/Kg	SW8240	11/21/96 19:02	PLM
Acrolein[107-02-8]	ND	6.3	mg/Kg	SW8240	11/21/96 19:02	PLM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM
Trichlorofluoromethane[75-69-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:02	PLM

Continued on next page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-002 Respectfully
Submitted:

DOW-S-S-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:30
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

112296 1028

PAGE 2

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
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Continued from previous page

SURROGATE RECOVERY - VOLATILE FRACTION

1,2-Dichloroethane-d4 <SURROGATE>	104	-----	% REC	SW8240	11/21/96 19:02 PLM
Toluene-d8 <SURROGATE>	104	-----	% REC	SW8240	11/21/96 19:02 PLM
Bromofluorobenzene <SURRGATE>	104	-----	% REC	SW8240	11/21/96 19:02 PLM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-002 Respectfully
Submitted:

DOW-S-S-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:30
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

112296 1028

J. N. Wright

ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2-Chlorophenol [95-57-8]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2-Nitrophenol [88-75-5]	NO	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2,4-Dimethylphenol [105-67-9]	NO	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
4-Chloro-3-methylphenol [59-50-7]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2,4-Dinitrophenol [51-28-5]	NO	1.7	mg/Kg	SW8270	11/21/96 16:09 JER
4-Nitrophenol [100-02-7]	NO	1.7	mg/Kg	SW8270	11/21/96 16:09 JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/21/96 16:09 JER
Pentachlorophenol [87-86-5]	NO	1.7	mg/Kg	SW8270	11/21/96 16:09 JER
SURRGATE RECOVERY - ACID FRACTION					
2-Fluorophenol <SURROGATE>	72	-----	% REC	SW8270	11/21/96 16:09 JER
Phenol-d6 <SURROGATE>	63	-----	% REC	SW8270	11/21/96 16:09 JER
2,4,6-Tribromophenol <SURROGATE>	100	-----	% REC	SW8270	11/21/96 16:09 JER

NO: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-002 Respectfully
Submitted:

DOW-S-S-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:30
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.DD01

R112296 1231

H.N. Wright

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/21/96 16:09 JER
Bis[2-chloroethyl]ether[111-44-4]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
1,3-Dichlorobenzene[541-73-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
1,4-Dichlorobenzene[106-46-7]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Bis(2-chloroisopropyl)ether[108-60-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/21/96 16:09 JER
Nitrobenzene[98-95-3]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Hexachloroethane[67-72-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Isophorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Naphthalene[91-20-3]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Hexachlorocyclopentadiene[77-47-4]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Dimethyl phthalate[131-11-3]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Acenaphthylene[208-96-8]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Acenaphthene[83-32-9]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2,6-Dinitrotoluene[606-20-2]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Fluorene[86-73-7]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
1,2-Diphenylhydrazine[122-66-7]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
N-Nitrosodiphenylamine[86-30-6]	ND	0.67	mg/Kg	SW8270	11/21/96 16:09 JER
Hexachlorobenzene[118-74-1]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
4-Bromophenyl phenyl ether[101-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Anthracene[120-12-7]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Di-n-butyl phthalate[84-74-2]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Fluoranthene[206-44-0]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER

Continued on next page

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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-002 Respectfully
Submitted:

DOW-S-S-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 14:30
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

R112296 1231

PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Pyrene[129-00-0]	NO	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Benzidine[92-87-5]	ND	1.7	mg/Kg	SW8270	11/21/96 16:09 JER
Butyl benzyl phthalate[85-68-7]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Bis(2-ethylhexyl)phthalate[117-81-7]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Chrysene[218-01-9]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Benzo(a)anthracene[56-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
3,3'-Dichlorobenzidine[91-94-1]	ND	1.7	mg/Kg	SW8270	11/21/96 16:09 JER
Di-n-octylphthalate[117-84-0]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Benzo(b)fluoranthene[205-99-2]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Benzo(k)fluoranthene[207-08-9]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Benzo(a)pyrene[50-32-8]	ND	0.33	mg/Kg	SW8270	11/21/96 16:09 JER
Indeno(1,2,3-cd)pyrene[193-39-5]	ND	0.67	mg/Kg	SW8270	11/21/96 16:09 JER
Dibenzo(a,h)anthracene[53-70-3]	ND	0.67	mg/Kg	SW8270	11/21/96 16:09 JER
Benzo(ghi)perylene[191-24-2]	ND	0.67	mg/Kg	SW8270	11/21/96 16:09 JER
SURROGATE RECDVERY - BASE/NEUT FRACTION					
Nitrobenzene-d5<SURROGATE>	67	-----	% REC	SW8270	11/21/96 16:09 JER
2-Fluorobiphenyl<SURROGATE>	73	-----	% REC	SW8270	11/21/96 16:09 JER
o-Terphenyl<SURROGATE>	84	-----	% REC	SW8270	11/21/96 16:09 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-003 Respectfully
Submitted:

DOW-S-N-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 15:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

112296 1028

J.M. Wright

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Vinyl chloride[75-01-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
1,1-Dichloroethene[75-35-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
1,1-Dichloroethane[75-34-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Chloroform[67-66-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
1,2-Dichloroethane[107-06-2]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Carbon tetrachloride[56-23-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Dibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/21/96 19:38 PLM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Acrylonitrile[107-13-1]	ND	6.3	mg/Kg	SW8240	11/21/96 19:38 PLM
Acrolein[107-02-8]	ND	6.3	mg/Kg	SW8240	11/21/96 19:38 PLM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM
Trichlorofluoromethane[75-69-4]	ND	0.63	mg/Kg	SW8240	11/21/96 19:38 PLM

Continued on next page

3

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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-003 Respectfully
Submitted:

DDW-S-N-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 15:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

112296 1028

PAGE 2

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
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Continued from previous page

SURROGATE RECOVERY - VOLATILE FRACTION

1,2-Dichloroethane-d4 <SURROGATE>	104	-----	% REC	SW8240	11/21/96 19:38 PLM
Toluene-d8 <SURROGATE>	106	-----	% REC	SW8240	11/21/96 19:38 PLM
Bromofluorobenzene <SURROGATE>	107	-----	% REC	SW8240	11/21/96 19:38 PLM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-003 Respectfully
Submitted:

DOW-S-N-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 15:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

112296 1028

J.N. Wright

ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2-Chlorophenol [95-57-8]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
4-Chloro-3-methylphenol [59-50-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2,4-Dinitrophenol [51-28-5]	ND	1.7	mg/Kg	SW8270	11/21/96 17:00 JER
4-Nitrophenol [100-02-7]	ND	1.7	mg/Kg	SW8270	11/21/96 17:00 JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/21/96 17:00 JER
Pentachlorophenol [87-86-5]	ND	1.7	mg/Kg	SW8270	11/21/96 17:00 JER
SURROGATE RECDVRY - ACID FRACTION					
2-Fluorophenol <SURROGATE>	67	-----	% REC	SW8270	11/21/96 17:00 JER
Phenol-d6 <SURRGATE>	63	-----	% REC	SW8270	11/21/96 17:00 JER
2,4,6-Tribromophenol <SURRGATE>	88	-----	% REC	SW8270	11/21/96 17:00 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-05D9-D03 Respectfully
Submitted:

DOW-S-N-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 15:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78D22.D001

112296 1028

H.N. Wright

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/21/96 17:00 JER
Bis(2-chloroethyl)ether[111-44-4]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
1,3-Dichlorobenzene[541-73-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
1,4-Dichlorobenzene[106-46-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Bis(2-chloroisopropyl)ether[108-60-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/21/96 17:00 JER
Nitrobenzene[98-95-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Hexachloroethane[67-72-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Isophorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Naphthalene[91-20-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Hexachlorocyclopentadiene[77-47-4]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Dimethyl phthalate[131-11-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Acenaphthylene[208-96-8]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Acenaphthene[83-32-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2,6-Dinitrotoluene[606-20-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Fluorene[86-73-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
1,2-Diphenylhydrazine[122-66-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
N-Nitrosodiphenylamine[86-30-6]	ND	0.67	mg/Kg	SW8270	11/21/96 17:00 JER
Hexachlorobenzene[118-74-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
4-Bromophenyl phenyl ether[101-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Anthracene[120-12-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Di-n-butyl phthalate[84-74-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Fluoranthene[206-44-0]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER

Continued on next page

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4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-003 Respectfully
Submitted:

DOW-S-N-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 15:00
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.00D1

H.N. Wright
112296 1028

PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Continued from previous page					
Pyrene [129-00-0]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Benzidine [92-87-5]	ND	1.7	mg/Kg	SW8270	11/21/96 17:00 JER
8Butyl benzyl phthalate [85-68-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Bis(2-ethylhexyl)phthalate [117-81-7]	NO	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Chrysene [218-01-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Benzo(a)anthracene [56-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
3,3'-Dichlorobenzidine [91-94-1]	ND	1.7	mg/Kg	SW8270	11/21/96 17:00 JER
Di-n-octylphthalate [117-84-0]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Benzo(b)fluoranthene [205-99-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Benzo(k)fluoranthene [207-08-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Benzo(a)pyrene [50-32-8]	ND	0.33	mg/Kg	SW8270	11/21/96 17:00 JER
Indeno(1,2,3-cd)pyrene [193-39-5]	ND	0.67	mg/Kg	SW8270	11/21/96 17:00 JER
Dibenzo(a,h)anthracene [53-70-3]	ND	0.67	mg/Kg	SW8270	11/21/96 17:00 JER
Benzo(ghi)perylene [191-24-2]	ND	0.67	mg/Kg	SW8270	11/21/96 17:00 JER
SURROGATE RECOVERY - BASE/NEUT FRACTION					
Nitrobenzene-d5<SURROGATE>	67	-----	% REC	SW8270	11/21/96 17:00 JER
2-Fluorobiphenyl <SURRGATE>	75	-----	% REC	SW8270	11/21/96 17:00 JER
o-Terphenyl <SURROGATE>	80	-----	% REC	SW8270	11/21/96 17:00 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-004 Respectfully
Submitted:

00W-S-E-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 16:25
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

112296 1028

H.N. Wright

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Chloromethane[74-87-3]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Bromomethane[74-83-9]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Vinyl chloride[75-01-4]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Chloroethane[75-00-3]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Methylene Chloride[75-09-2]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
1,1-Dichloroethene[75-35-4]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
1,1-Dichloroethane[75-34-3]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
trans-1,2-Dichloroethene[156-60-5]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Chloroform[67-66-3]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
1,2-Dichloroethane[107-06-2]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
1,1,1-Trichloroethane[71-55-6]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Carbon tetrachloride[56-23-5]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Bromodichloromethane[75-27-4]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
1,2-Dichloropropane[78-87-5]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
trans-1,3-Dichloropropene[10061-02-6]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
cis-1,3-Dichloropropene[10061-01-5]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Trichloroethene[79-01-6]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Oibromochloromethane[124-48-1]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
1,1,2-Trichloroethane[79-00-5]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
2-Chloroethyl vinyl ether[110-75-8]	ND	1.3	mg/Kg	SW8240	11/21/96 20:15 PLM
Bromoform[75-25-2]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
1,1,2,2-Tetrachloroethane[79-34-5]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Tetrachloroethene[127-18-4]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Benzene[71-43-2]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Toluene[108-88-3]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Ethylbenzene[100-41-4]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Chlorobenzene[108-90-7]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Acrylonitrile[107-13-1]	ND	6.3	mg/Kg	SW8240	11/21/96 20:15 PLM
Acrolein[107-02-8]	ND	6.3	mg/Kg	SW8240	11/21/96 20:15 PLM
1,2-Dichlorobenzene[95-50-1]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
1,3-Dichlorobenzene[541-73-1]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
1,4-Dichlorobenzene[106-46-7]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM
Trichlorofluoromethane[75-69-4]	ND	0.63	mg/Kg	SW8240	11/21/96 20:15 PLM

Continued on next page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-004 Respectfully
Submitted:

DOW-S-E-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 16:25
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

112296 1028

PAGE 2

PRIORITY POLLUTANTS:VOLATILE FRACTION
Purge/Trap/Desorb
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
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Continued from previous page

SURROGATE RECOVERY - VOLATILE FRACTION

1,2-Dichloroethane-d4 <SURROGATE>	104	-----	% REC	SW8240	11/21/96 20:15 PLM
Toluene-d8 <SURROGATE>	104	-----	% REC	SW8240	11/21/96 20:15 PLM
Bromofluorobenzene <SURROGATE>	103	-----	% REC	SW8240	11/21/96 20:15 PLM

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
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DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 16:25
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

112296 1028

H.N. Wright

ACID EXTRACTABLES: PRIORITY POLLUTANT LIST

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
Phenol [108-95-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2-Chlorophenol [95-57-8]	NO	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2-Nitrophenol [88-75-5]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2,4-Dimethylphenol [105-67-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2,4-Dichlorophenol [120-83-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
4-Chloro-3-methylphenol [59-50-7]	NO	0.33	mg/Kg	SW827D	11/21/96 17:50 JER
2,4,6-Trichlorophenol [88-06-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2,4-Dinitrophenol [51-28-5]	ND	1.7	mg/Kg	SW8270	11/21/96 17:50 JER
4-Nitrophenol [100-02-7]	ND	1.7	mg/Kg	SW8270	11/21/96 17:50 JER
2-Methyl-4,6-dinitrophenol [534-52-1]	ND	1.7	mg/Kg	SW8270	11/21/96 17:50 JER
Pentachlorophenol [87-86-5]	NO	1.7	mg/Kg	SW8270	11/21/96 17:50 JER
SURROGATE RECOVERY - ACID FRACTION					
2-Fluorophenol <SURROGATE>	68	-----	% REC	SW827D	11/21/96 17:50 JER
Phenol-d6 <SURROGATE>	66	-----	% REC	SW827D	11/21/96 17:50 JER
2,4,6-Tribromophenol <SURRGATE>	81	-----	% REC	SW827D	11/21/96 17:50 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

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CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-004 Respectfully
Submitted:

DOW-S-E-BTM GRAB
DOW HANGING ROCK, OHIO

Date Sampled 11/20/96 16:25
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

112296 1028

H. M. Wright

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	ANALYZED DATE/TIME/ANALYST
N-Nitrosodimethylamine[62-75-9]	ND	1.7	mg/Kg	SW8270	11/21/96 17:50 JER
Bis(2-chloroethyl)ether[111-44-4]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
1,3-Dichlorobenzene[541-73-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
1,4-Dichlorobenzene[106-46-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
1,2-Dichlorobenzene[95-50-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Bis(2-chloroisopropyl)ether[108-60-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
N-Nitrosodi-n-propylamine[621-64-7]	ND	0.67	mg/Kg	SW8270	11/21/96 17:50 JER
Nitrobenzene[98-95-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Hexachloroethane[67-72-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Isophorone[78-59-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Bis(2-chloroethoxy)methane[111-91-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
1,2,4-Trichlorobenzene[120-82-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Naphthalene[91-20-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Hexachlorobutadiene[87-68-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Hexachlorocyclopentadiene[77-47-4]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2-Chloronaphthalene[91-58-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Dimethyl phthalate[131-11-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Acenaphthylene[208-96-8]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Acenaphthene[83-32-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2,6-Dinitrotoluene[606-20-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
2,4-Dinitrotoluene[121-14-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Fluorene[86-73-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
4-Chlorophenyl phenyl ether[7005-72-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
1,2-Diphenylhydrazine[122-66-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Diethyl phthalate[84-66-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
N-Nitrosodiphenylamine[86-30-6]	ND	0.67	mg/Kg	SW8270	11/21/96 17:50 JER
Hexachlorobenzene[118-74-1]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
4-Bromophenyl phenyl ether[101-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Phenanthrene[85-01-8]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Anthracene[120-12-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Di-n-butyl phthalate[84-74-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Fluoranthene[206-44-0]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER

Continued on next page



CT&E Environmental Services Inc.

Laboratory Division

Laboratory Analysis Report

P. Gebhard
ERM, INC.

Laboratory Number 296-11-0509-004 Respectfully
Submitted:

DOW-S-E-BTM GRAB
DOW HANGING ROCK, OHID

Date Sampled 11/20/96 16:25
Date Received 11/20/96

Sampled by CLIENT
PO # 78022.0001

112296 1028

PAGE 2

PRIORITY POLLUTANTS-EXTRACTABLE ORGANICS
BASE/NEUTRAL FRACTION
Soil Procedure/Sonication Extraction
ALL RESULTS ARE ON AN AS RECEIVED BASIS

PARAMETER	RESULT	MDL	UNITS	METHOD	DATE/TIME/ANALYST
Continued from previous page					
Pyrene[129-00-0]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Benzidine[92-87-5]	ND	1.7	mg/Kg	SW8270	11/21/96 17:50 JER
Butyl benzyl phthalate[85-68-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Bis(2-ethylhexyl)phthalate[117-81-7]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Chrysene[218-01-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Benzo(a)anthracene[56-55-3]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
3,3'-Dichlorobenzidine[91-94-1]	ND	1.7	mg/Kg	SW8270	11/21/96 17:50 JER
Di-n-octylphthalate[117-84-0]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Benzo(b)fluoranthene[205-99-2]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Benzo(k)fluoranthene[207-08-9]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Benzo(a)pyrene[50-32-8]	ND	0.33	mg/Kg	SW8270	11/21/96 17:50 JER
Indeno[1,2,3-cd]pyrene[193-39-5]	ND	0.67	mg/Kg	SW8270	11/21/96 17:50 JER
Dibenzo(a,h)anthracene[53-70-3]	ND	0.67	mg/Kg	SW8270	11/21/96 17:50 JER
Benzo(ghi)perylene[191-24-2]	ND	0.67	mg/Kg	SW8270	11/21/96 17:50 JER
SURRGATE RECOVERY - BASE/NEUT FRACTDN					
Nitrobenzene-d5<SURROGATE>	67	-----	% REC	SW8270	11/21/96 17:50 JER
2-Fluorobiphenyl<SURRGATE>	76	-----	% REC	SW8270	11/21/96 17:50 JER
o-Terphenyl<SURRGATE>	76	-----	% REC	SW8270	11/21/96 17:50 JER

ND: Not detected at a concentration greater than the MDL - Method Detection Limit.

Method Reference: USEPA: Test Methods For Evaluating Solid Waste; SW-846, 3rd Edition; Nov 1986.

1258 Greenbrier Street, Charleston, WV 25311-1002 — Tel: (304) 346-0725 Fax: (304) 346-0761
4643 Benson Avenue, Baltimore, MD 21227-1410 — Tel: (410) 247-7400 Fax: (410) 247-7402

4440 Glen Este-Withamsville Road, Suite 900, Cincinnati, OH 45245-1331 — Tel: (513) 752-9696 Fax: (513) 752-2614



Locations Nationally
 • Alaska • Mississippi
 • California • New Jersey
 • Florida • Ohio
 • Illinois • Pennsylvania
 • Maryland • West Virginia
 • Michigan

CHAIN OF CUSTODY RECORD

① CLIENT: P. Gebhard, Inc.		PHONE NO: (304) 757-8017		PAGE 1 OF 1	
CONTACT: P. Gebhard		PROJECT: Dow		CT&E Reference: 11-509-141	
REPORTS TO: P. Gebhard		FAX NO: (304) 757-8190			
INVOICE TO: P. Gebhard		P.O. NUMBER: 78022.00.01			
② LAB ND.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	REMARKS
DOW - S - W - Bfm	11/20/96	1400	SDIL	2 G X X	
DOW - S - S - Bfm	1430	SDIL	2 G X X		
DOW - S - N - Bfm	1500	SDIL	2 G X X		
DOW - S - E - Bfm	1625	SDIL	2 G X X		
③ Analysis Required C= COMP G= GRAB					
④ Shipping Carrier: C-1-Environ Samples Received Cold? (Circle) YES NO					
Shipping Ticket No: 1930 Temperature °C: 50					
⑤ Collected / Relinquished By: (1) P. Gebhard Data Deliverables Required Relinquished By: (2) Date Time Received By: Level I Level II Level III					
Relinquished By: (3) Date Time Received By: INTACT BROKEN ABSENT					
Relinquished By: (4) Date Time Received For Laboratory By: Requested Turnaround Time and Special Instructions: Rush					



Drew Industrial Division/ Drew Ameroid® Marine Division

ASHLAND CHEMICAL, INC. SUBSIDIARY OF ASHLAND OIL, INC.
One Drew Plaza, Boonton, New Jersey 07005

ANALYTICAL REPORT

COOLING WATER

SAMPLE FROM

DOW CHEMICAL USA
HANGING ROCK PLANT-OLD ROUTE
52 AT GILRUTH LANE
IRONTON OH I N 45638

RFA NUMBER 95176 -1
DATE SAMPLED 06/15/94
DATE RECEIVED 06/20/94
DATE REPORTED 06/24/94
DREW REPRESENTATIVE D DEAL

SYSTEM IDENTIFICATION - POND WATER

SAMPLE NUMBER 01

SAMPLE DESCRIPTION POND WATER

TEST DESCRIPTION	RESULTS
PH VALUE	8.7 o.k.
P ALKALINITY (AS CACO ₃) MG/L	22.0
HYDROXIDE ALKALINITY (AS CACO ₃) MG/L	< 0.1
TOTAL ALKALINITY (AS CACO ₃) MG/L	114.0 ✓
TOTAL HARDNESS (AS CACO ₃) MG/L	173.2 ✓
CALCIUM (AS CACO ₃) MG/L	129.0
MAGNESIUM (AS CACO ₃) MG/L	44.2
CHLORIDE (AS CL) MG/L	821.9
SULFATE (AS SO ₄) MG/L	11.6
SILICA (AS SIO ₂) MG/L	7.5
CONDUCTIVITY, MICROMHOS/CM	3,710.0



**Drew Industrial Division/
Drew Amerold® Marine Division**
ASHLAND CHEMICAL, INC. SUBSIDIARY OF ASHLAND OIL, INC.
One Drew Plaza, Boonton, New Jersey 07005

ANALYTICAL REPORT

HIGH PURITY

SAMPLE FROM

DOW CHEMICAL USA
HANGING ROCK PLANT-OLD ROUTE
52 AT GILRUTH LANE
IRONTON OH I N 45638
SYSTEM IDENTIFICATION - POND WATER

RFA NUMBER 95176 -1
DATE SAMPLED 06/15/94
DATE RECEIVED 06/20/94
DATE REPORTED 06/24/94
DREW REPRESENTATIVE D DEAL

SAMPLE NUMBER 02

SAMPLE DESCRIPTION POND WATER

TEST DESCRIPTION

RESULTS

IRON (AS FE) UG/L	20.0
COPPER (AS CU) UG/L	6.0



**Drew Industrial Division/
Drew Ameroid® Marine Division**
ASHLAND CHEMICAL, INC. SUBSIDIARY OF ASHLAND OIL, INC.
One Drew Plaza, Boonton, New Jersey 07005

Joe Heil

ANALYTICAL REPORT

COOLING WATER

SAMPLE FROM

DOW CHEMICAL USA
HANGING ROCK PLANT-OLD ROUTE
52 AT GILRUTH LANE
IRONTON OH I N 45638

RFA NUMBER 95176 -1
DATE SAMPLED 06/15/94
DATE RECEIVED 06/20/94
DATE REPORTED 06/24/94
DREW REPRESENTATIVE D DEAL

SYSTEM IDENTIFICATION - POND WATER

SAMPLE NUMBER 01

SAMPLE DESCRIPTION POND WATER

TEST DESCRIPTION	RESULTS
PH VALUE	8.7
P ALKALINITY (AS CACO ₃) MG/L	22.0
HYDROXIDE ALKALINITY (AS CACO ₃) MG/L	< 0.1
TOTAL ALKALINITY (AS CACO ₃) MG/L	114.0
TOTAL HARDNESS (AS CACO ₃) MG/L	173.2
CALCIUM (AS CACO ₃) MG/L	129.0
MAGNESIUM (AS CACO ₃) MG/L	44.2
CHLORIDE (AS CL) MG/L	821.9
SULFATE (AS SO ₄) MG/L	11.6
SILICA (AS SIO ₂) MG/L	7.5
CONDUCTIVITY, MICROMHOS/CM	3,710.0



Drew Industrial Division/ Drew Ameroid® Marine Division

ASHLAND CHEMICAL, INC. SUBSIDIARY OF ASHLAND OIL, INC.
One Drew Plaza, Boonton, New Jersey 07005

ANALYTICAL REPORT

HIGH PURITY

SAMPLE FROM

DOW CHEMICAL USA
HANGING ROCK PLANT-OLD ROUTE
52 AT GILRUTH LANE
IRONTON OH I N 45638

RFA NUMBER 95176 -1
DATE SAMPLED 06/15/94
DATE RECEIVED 06/20/94
DATE REPORTED 06/24/94
DREW REPRESENTATIVE D DEAL

SYSTEM IDENTIFICATION - POND WATER

SAMPLE NUMBER 02

SAMPLE DESCRIPTION POND WATER

TEST DESCRIPTION	RESULTS
IRON (AS FE) UG/L	20.0
COPPER (AS CU) UG/L	6.0



**Drew Industrial Division/
Drew Ameroid® Marine Division**
ASHLAND CHEMICAL, INC. SUBSIDIARY OF ASHLAND OIL, INC.
One Drew Plaza, Boonton, New Jersey 07005

ANALYTICAL REPORT

HIGH PURITY

SAMPLE FROM

DOW CHEMICAL USA
HANGING ROCK PLANT-OLD ROUTE
52 AT GILRUTH LANE
IRONTON OH I N 45638

RFA NUMBER 80512 -1
DATE SAMPLED 07/12/94
DATE RECEIVED 07/14/94
DATE REPORTED 07/22/94
DREW REPRESENTATIVE D DEAL

SYSTEM IDENTIFICATION - POND WATER

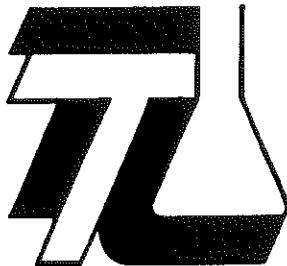
SAMPLE NUMBER 01

SAMPLE DESCRIPTION POND WATER

TEST DESCRIPTION	RESULTS
TOTAL CHROMIUM (AS CRO ₄), UG/L	< 10.0 ✓

COMMENTS

CC:MOFFAT, MINCAR



Technical
Testing
Laboratories Inc.

LABORATORY ANALYSIS REPORT

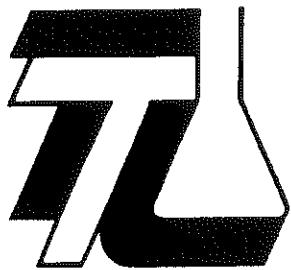
DOW CHEMICALS LAB. NO. H8394
ATTN: Don Murphy DATE SAMPLED 3/11/1988
DATE RECEIVED 3/11/1988
3/11/1988-
001 Fire Pond DATE ANALYZED 3/28/1988
ANALYST BP.DW/TS

NOTE: ALL RESULTS EXPRESSED IN MG/L UNLESS OTHERWISE DESIGNATED, < = LESS THAN

PARAMETERS

BOD ₅	8
COD	430
Ammonia Nitrogen	1
Phosphorous	1.79

RESPECTFULLY SUBMITTED: B. S. Self



Technical
Testing
Laboratories Inc.

LABORATORY ANALYSIS REPORT

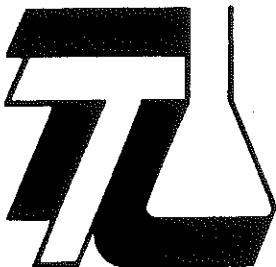
DOW CHEMICALS LAB. NO. H8394
ATTN: Don Murphy DATE SAMPLED 3/11/1988
DATE RECEIVED 3/11/1988
001 Fire Pond DATE ANALYZED 3/17/1988 @
4:16 P.M.
ANALYST MD

NOTE: ALL RESULTS EXPRESSED IN MG/L UNLESS OTHERWISE DESIGNATED, < = LESS THAN

PARAMETERS

Antimony	0.52
Arsenic	0.013
Beryllium	<0.001
Cadmium	<0.005
Chromium	<0.02
Copper	0.03
Lead	<0.2
Mercury	<0.0005
Nickel	<0.02
Selenium	<0.02
Silver	<0.02
Thallium	<0.1
Zinc	0.085

RESPECTFULLY SUBMITTED: B.. Saly



Technical
Testing
Laboratories Inc.

LABORATORY ANALYSIS REPORT

Dow Chemical LAB. NO. H8394
 DATE SAMPLED 3-11-88
 DATE RECEIVED 3-11-88
 DATE ANALYZED 3-22-88
001 Fire Pond ANALYST MAM/WAL

NOTE: ALL RESULTS EXPRESSED IN MG/L UNLESS OTHERWISE DESIGNATED, < = LESS THAN

PURGEABLE ORGANICS
page 1 of 2
EPA METHOD 624/SW-846,8240
Purge/Trap/Desorb

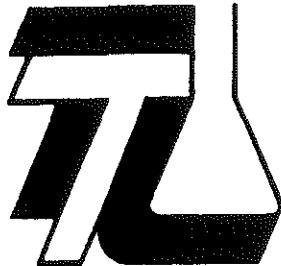
<u>PARAMETERS</u>	<u>CAS Number</u>	<u>RESULTS, ug/L</u>	<u>MDL, ug/L</u>
Chloromethane	[74-87-3]	ND	10
Bromomethane	[74-83-9]	ND	10
Vinyl Chloride	[75-01-4]	ND	10
Chloroethane	[75-00-3]	ND	10
Methylene Chloride	[75-09-2]	48-B{25}	10
Trichlorofluoromethane	[75-69-4]	ND	10
1,1-Dichloroethene	[75-35-4]	ND	10
1,1-Dichloroethane	[75-34-3]	ND	10
Trans-1,2-Dichloroethene	[156-60-5]	ND	10
Chloroform	[67-66-3]	20	10
1,2-Dichloroethane	[107-06-2]	ND	10
1,1,1-Trichloroethane	[71-55-6]	ND	10
Carbon Tetrachloride	[56-23-5]	ND	10
Bromodichloromethane	[75-27-4]	ND	10
1,2-Dichloropropane	[78-87-5]	ND	10
Trans-1,3-Dichloropropene	[10061-02-6]	ND	10
Cis-1,3-Dichloropropene	[10061-01-5]	ND	10
Trichloroethene	[79-01-6]	ND	10
Dibromochloromethane	[124-48-1]	ND	10

ND: Not detected at a concentration greater than or equal to the Method Detection Limit [MDL]

B{}: Indicates the parameter was also found in the laboratory blank. The blank concentration is indicated in brackets.

RESPECTFULLY SUBMITTED:

B.-S. Salas



Technical
Testing
Laboratories Inc.

LABORATORY ANALYSIS REPORT

Dow Chemical _____ LAB. NO. H8394

DATE SAMPLED 3-11-88

DATE RECEIVED 3-11-88

DATE ANALYZED 3-22-88

001 Fire Pond ANALYST MAM/WAL

NOTE: ALL RESULTS EXPRESSED IN MG/L UNLESS OTHERWISE DESIGNATED, < = LESS THAN

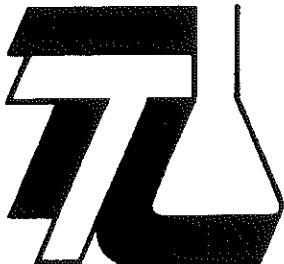
PURGEABLE ORGANICS
page 2 of 2
EPA METHOD 624/SW-846, 8240
Purge/Trap/Desorb

PARAMETERS	CAS Number	RESULTS, ug/L	MDL, ug/L
1,1,2-Trichloroethane	[79-00-5]	ND	10
2-Chloroethylvinylether	[110-75-8]	ND	20
Bromoform	[75-25-2]	ND	10
1,1,2,2-Tetrachloroethane	[79-34-5]	ND	10
Tetrachloroethene	[127-18-4]	ND	10
Benzene	[71-43-2]	ND	10
Toluene	[108-88-3]	ND	10
Ethylbenzene	[100-41-4]	ND	10
Chlorobenzene	[108-90-7]	ND	10
Acrylonitrile	[107-13-1]	ND	100
Acrolien	[107-02-8]	ND	100

ND: Not detected at a concentration greater than or equal to the Method Detection Limit [MDL]

B{}: Indicates the parameter was also found in the laboratory blank. The blank concentration is indicated in brackets.

RESPECTFULLY SUBMITTED: B. S. Self



Technical
Testing
Laboratories Inc.

LABORATORY ANALYSIS REPORT

Dow Chemical _____ LAB. NO. H8394

DATE SAMPLED 3-11-88

DATE RECEIVED 3-11-88

001 Fire Pond DATE ANALYZED 3-31-88

ANALYST TW/JR/WL

NOTE: ALL RESULTS EXPRESSED IN MG/L UNLESS OTHERWISE DESIGNATED, < = LESS THAN

EXTRACTABLE ORGANICS-BASE/NEUTRAL FRACTION

page 1 of 2

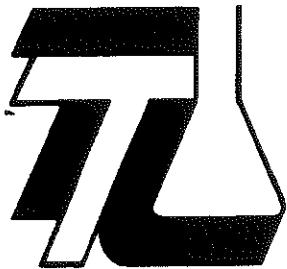
EPA METHOD 625/SW-846, 8270

Liquid:Liquid Extraction

<u>PARAMETERS</u>	<u>CAS Number</u>	<u>RESULTS, ug/L</u>	<u>MDL, ug/L</u>
N-Nitrosodimethylamine	[62-75-9]	ND	50
Bis(2-chloroethyl)ether	[111-44-4]	ND	10
1,3-Dichlorobenzene	[541-73-1]	ND	10
1,4-Dichlorobenzene	[106-46-7]	ND	10
1,2-Dichlorobenzene	[95-50-1]	ND	10
Bis(2-chloroisopropyl)ether	[39638-32-9]	ND	10
N-Nitrosodi-n-propylamine	[621-64-7]	ND	20
Nitrobenzene	[98-95-3]	ND	10
Hexachloroethane	[67-72-1]	ND	10
Isophorone	[78-59-1]	ND	10
Bis(2-Chloroethoxy)methane	[111-91-1]	ND	10
1,2,4-Trichlorobenzene	[120-82-1]	ND	10
Naphthalene	[91-20-3]	ND	10
Hexachlorobutadiene	[87-68-3]	ND	10
Hexachlorocyclopentadiene	[77-47-4]	ND	10
2-Chloronaphthalene	[91-58-7]	ND	10
Dimethylphthalate	[131-11-3]	12	10
Acenaphthylene	[208-9-8]	ND	10
Acenaphthene	[83-3-9]	ND	10
2,6-Dinitrotoluene	[60620-2]	ND	10
2,4-Dinitrotoluene	[12-14-2]	ND	10
Fluorene	[8-73-7]	ND	10
4-Chlorophenylphenylether	[005-72-3]	ND	10

ND: Not detected at a concentration greater than or equal to the Method Detection Limit

RESPECTFULLY SUBMITTED: R.S. Sall



Technical
Testing
Laboratories Inc.

LABORATORY ANALYSIS REPORT

Dow Chemical _____ LAB. NO. H8394

DATE SAMPLED 3-11-88

DATE RECEIVED 3-11-88

DATE ANALYZED 3-31-88

001 Fire Pond ANALYST TW/JR/WL

NOTE: ALL RESULTS EXPRESSED IN MG/L UNLESS OTHERWISE DESIGNATED, < = LESS THAN

EXTRACTABLE ORGANICS-BASE/NEUTRAL FRACTION

page 2 of 2
EPA METHOD 625/SW-846, 8270
Liquid:Liquid Extraction

PARAMETERS	CAS Number	RESULTS, ug/L	MDL, ug/L
1,2-Diphenylhydrazine	[122-66-7]	ND	10
Diethylphthalate	[84-66-2]	49	10
N-Nitrosodiphenylamine	[86-30-6]	ND	20
Hexachlorobenzene	[118-74-1]	ND	10
4-Bromophenylphenylether	[101-55-3]	ND	10
Phenanthrene	[85-01-8]	ND	10
Anthracene	[120-12-7]	ND	10
Di-n-butylphthalate	[84-74-2]	ND	10
Fluoranthene	[206-44-0]	ND	10
Pyrene	[129-00-0]	ND	10
Benzidine	[92-87-5]	ND	50
Butylbenzylphthalate	[85-68-7]	ND	10
Bis(2-ethylhexyl)phthalate	[117-81-7]	ND	10
Chrysene	[218-01-9]	ND	10
Benzo(a)anthracene	[56-55-3]	ND	10
3,3'-Dichlorobenzidine	[91-94-1]	ND	50
Di-n-octylphthalate	[117-84-0]	ND	10
Benzo(b)fluoranthene	[205-99-2]	ND	10
Benzo(k)fluoranthene	[207-08-9]	ND	10
Benzo(a)pyrene	[50-32-8]	ND	10
Indeno(1,2,3-c,d)pyrene	[193-39-5]	ND	20
Dibenzo(a,h)anthracene	[53-70-3]	ND	20
Benzo(ghi)perylene	[191-24-2]	ND	20

ND: Not detected at a concentration greater than or equal to the Method Detection Limit [MDL]

RESPECTFULLY SUBMITTED:

B.s. J.W.